



# THE SCRABBLE® PLAYER'S

# H A N D B O O K

SECOND EDITION



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***“Lasciate ogni speranza, voi ch'entrate!”***

# The Scrabble Player's Handbook

## Welcome!

This book has been written by many of the world's leading Scrabble players. Our intention is to provide an easy-to-read guide to everything you need to know about this wonderful game, whether you are a regular online player, perhaps thinking about stepping nervously into a Scrabble club for the first time, or already a seasoned tournament attendee interested in graduating to expert status. We'll start with the basics of competitive Scrabble and cover everything the game has to offer at all levels.

We are keen to share our advice on everything from word learning and winning strategies to practical information such as where to buy the best Scrabble boards and where to play online. However, this book is not just about improvement, but about appreciation of the game of Scrabble, which we believe is best achieved by understanding its complexities. We believe that the combination of creativity, strategy, luck, memory, aesthetics, tension and fun makes Scrabble worthy of being played at the highest possible level, and furthermore that consistently good Scrabble play is a lot more achievable than many people believe. It is the belief of every contributor to this book that expert level Scrabble play is achievable by *anyone* who has the motivation to work towards it; all you need is the confidence and inspiration to learn, along with the information telling you how to get there. We're going to provide you with everything you need to know within these pages, and hopefully raise a few smiles along the way too.

A few years ago, an Israeli expert player was giving some advice to a newcomer, only for her to reply: "Oh I don't want to take it that seriously; I only play for fun". The expert replied: "Well what do you think I play it for, misery?!". Scrabble is a game in which enjoyment improves concurrently with ability. Wide open boards with many possibilities lead to higher scores and a more interesting experience. If crazy words with obscure meanings put you off, then you may be reading the wrong book; this is very different from Scrabble with Granny at Christmas. The book's authors know how fun it can be to lay down a bizarre-looking combination of letters knowing that the opponent's attempt to challenge it off will be unsuccessful, or how thrilling it can be to combine word-power with a well devised strategy to squeak a win out of a seemingly impossible endgame.

Competitive Scrabble is tough and you must prepare to make a thousand mistakes without giving up; remember that an expert is defined as someone who has made every possible mistake within a narrow field! But remember also that 99% of people will never be more than *quite good* at anything. If you want to be in the 1% who are excellent at something, this book will teach you how.

Whether you're an online Scrabble fan wanting a few tips to beat your friends, or you're curious about taking your game to "the next level", we hope you get as much enjoyment out of this book as we've gotten from writing it. Please help us share our love of the game by distributing this book to anyone who might benefit from it; it is a gift to Scrabble lovers across the world from those who understand the game better than anyone else.

This is how we play Scrabble.

## Editor's Note

The Handbook presumes that you are already familiar with the basic game rules of Scrabble, such as the face value of each letter tile, the premium squares, and how move scores are calculated. If not, a quick web search will find the standard Scrabble rules on a variety of websites.

This book uses the Collins Scrabble Words (CSW) word list. If you reside in North America, and for some strange reason you prefer the American word list, many of these tips will still apply, but if the additional words throw you off you can find Scrabble tips [here](#).

For the purpose of consistency, the term 'bonus' is used to refer to playing all seven tiles in one turn. This can also be known as a 'bingo', a 'Scrabble' and various other terms used around the world.

The board grid references are in the format (7d), indicating a word which starts in the 7<sup>th</sup> row in the *d* column. The direction of the play is shown by whether the letter or number appears first, thus a word at (7d) is played horizontally along the 7<sup>th</sup> row, while a word at (d7) is played vertically in the *d* column.

An asterisk denotes an invalid word (a phoney) such as DICY\*.

Although some effort has been made to explain Scrabble terminology as it appears, in case of doubt please refer to the Glossary at the end of the book.

Some chapters are written by one author and credited as such, although other Handbook team members may have offered advice and suggestions during the writing process. Other chapters are not credited to a specific author and should be viewed as written by the whole Handbook team together.

This book has taken its authors several hundreds of hours to compile and it is presented to the Scrabble community entirely free. This might appear generous but our motivation for writing the book is entirely selfish: we love playing Scrabble face to face with people across the world and we want more people to play against! We would like you to distribute any part or all of the information here to anyone to whom it would be of benefit, and we positively encourage you to email around the PDF or print, photocopy and distribute any part of *The Scrabble Player's Handbook* as widely as possible. Just make sure you always retain the footer at the bottom of every page to give us due credit for our work.

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## Meet the Team

**Stewart Holden** (editor)  
Northern Ireland

I'm originally from Oxford, England but have been resident in Northern Ireland since 2008 where I live with my wife and our two children. I played Scrabble casually during my teens but only discovered the competitive scene in 2000 when I found myself at university with Brett Smitheram (below), who mentored me to expert level. I have since become an ABSP Grandmaster and represented UK at the World Championships in 2003 and 2011, finishing a satisfying 28<sup>th</sup> in the latter and notching up the highest individual game score of the tournament (694pts). I was runner-up in the UK National Championship in 2007 and have won a variety of minor tournaments over my thirteen years of competitive play. I am very active in Scrabble administration and have been on the ABSP committee for over ten years.



I love Scrabble because it combines so many different skills – memory, spatial awareness, creativity, mathematics, linguistics, psychology – in a way that nothing else does. The local and international Scrabble communities are very important to me I find that even during rare periods of being out of favour with the game itself, it is the people I miss that always keeps me coming back for more.

**Kenji Matsumoto** (editor)  
USA

I'm 33 years old from Reno, Nevada, but originally from Aiea, HI. I've been rated in the top 10 in North America for most of the last ten years. I graduated from Hampshire College in 2009, focusing primarily on game theory. My thesis was on the relationship between classic economic theory and its relationship with board and card games, including Scrabble.



Once I completed my studies, I set out to write a book about Scrabble. That book turned into my personal obsession: it was more important than any success I could achieve during Scrabble tournaments. Over time, the book got to be so long that I separated it into two books: one for tournament play and another book explaining the basics and fundamentals of Scrabble. After going through nearly ten drafts, I finally completed both books in 2014: a book explaining the fundamentals (entitled *Word*) and a book explaining tournament level concepts (entitled *Scrabble Solved*). (There are also North American versions available under different titles.)

While I can still play at a high level, my focus is primarily on promoting top level Scrabble through social media and my website as well as consulting other high-level players how to improve their game, both in the US and around the world. I want to introduce people to the world of top-level Scrabble: a beautiful, complex game that runs so much deeper than simply scoring the most points and keeping the best leave. I run a website at <http://www.breakingthegame.net> as well as a YouTube channel where I analyze games and create videos, hoping to draw attention to the world of competitive Scrabble.

## **Evan Berofsky**

Canada

I am 42, a Libra, and enjoy short walks off long piers. I am originally from Toronto, Canada, but moved to the US in 2013 for the purpose of getting one of those fancy wedding rings. I spend most of my working hours as a logistics analyst, but also find the time to do some freelance sports writing.



Since I've started playing 'professionally' over 20 years ago, I have won around 40 tournaments. This doesn't include the ten times I've earned the Toronto Club championship season title. I have also represented Canada four times at the Worlds (2003, 2007, 2014, 2016), finishing in the middle of the pack in all four.

In my opinion, Scrabble is the perfect combination of skill and strategy. Knowing and accumulating words is one thing, but what really got me hooked to the game is how they can be applied in both a fun and intelligent way. I've stuck with Scrabble as I can still treat it as a game. Focus may be necessary at times, but I try to use most of my resources in life for other things (weird, I know).

## **Paul Gallen**

Northern Ireland

My major Scrabble achievements to date have been finishing 8th in WSC 2011, 7th in WSC 2013, 9th in WSC 2017, 4th in Causeway Challenge 2010, six Northern Ireland Championship titles, three All Ireland Championships, and 7 UK majors (including the UK National Championship in 2012). I also write an article in the Times every Saturday within the UK.



I enjoy the game as it is a mixture of language and maths, two subjects which I enjoyed at school. It is a very easy game to get started at and there is no limit to how much you can improve. I also enjoy the tournament scene, in particular international tournaments where you get to meet new people and see a bit of the world.

**Andrew Fisher**  
Australia

‘I am an auditor and Chartered Accountant living in Melbourne. I hold passports for both UK and Australia, but having emigrated in 2002 I now represent the latter. I have competed in Scrabble tournaments since the 1980s, witnessing many changes in the lexicon and playing environment – mostly for the better. My first international event was the 1991 WSC in London, and I have competed in most subsequent editions where convenient; domestically I have notched up quite a few major wins including Nationals and Masters in both UK and Australia, but alas nothing better than second in international tourneys (CNA Masters, King’s Cup and WSC). I cowrote the well-regarded *How to Win at Scrabble* with David Webb, and was involved with WESPA as treasurer for over a decade. I also enjoy solving and setting tough cryptic crosswords, and have had several of my own published (including 14 to date in the notorious Times Listener series)’



I play Scrabble because my brain works in letters and words rather than images, so in the first instance there is an aesthetic pleasure to the game. I am not an outgoing person but I have a strong competitive spirit, and Scrabble enables me to pit my wits against other players in a way that appeals – deploying a huge repository of beautiful words, solving a series of thought-provoking problems to best effect as the game progresses, and stretching my own ability to find ways of winning.

**Toh Weibin**  
Singapore

I'm a 27-year old public servant from Singapore. I have played competitive Scrabble since 2004, with tournament successes both locally and overseas. Personal highlights include winning the World Youth Championships in 2007 as well as the National Championships at home in 2011 and 2015; I was also honoured to represent my home country in several international tournaments.

I play this game for a variety of reasons. like learning words; the spellings, patterns, and sometimes meanings. I like the analyses behind the game as well, as they bring order to the chaos behind the letters. The most important reason why I play this game, however, is the accessibility and appeal of international tournaments. I enjoy travelling and connecting with fellow Scrabble players - often - over a game.



**Kevin McMahon**

Ireland

Hello, I'm Kevin McMahon, 32 years old, based in Cork, Ireland, working as a physics teacher.

My Scrabble achievements: I've won many tournaments in Ireland, including the All Ireland Championship three times (2007-2009). I was on the winning Irish team at the 2011 Four Nations tournament, where I also finished top of the individual standings. I won the 2012 British Matchplay Scrabble Championship. I also represented Ireland at the 2009 and 2013 WSC: certainly a memorable experience.

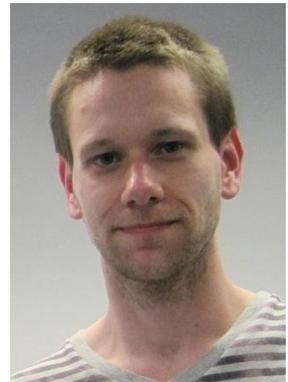
As for why I play? Firstly, the act of memorising loads of words appeals to my obsessive nature. The sense of progression as I improve is quite rewarding. I believe the element of luck adds greatly to the game. I like the feeling of excitement and drama each time I turn over new tiles, from my heart sinking if they are junk to the buzz I get when I realise I have a fancy high-scoring bonus.

Over the years I've also grown to enjoy the social side of the game and the chance to spend time with many great people, some of whom I would never normally get the chance to interact with. The range of different types of people who enjoy Scrabble is something to be proud of I feel.

**Edward Okulicz**

Australia

I'm a 36-year old public servant and freelance editor based in Sydney, Australia. It took me two and a half years to go from novice to Australian Champion. I was the winner in the world's highest scoring tournament game, and have won over 100 tournaments in Australia. On the world stage, I have competed in five World Championships and was runner-up at the 2008 Causeway Championship, at the time the world's longest tournament.



I play Scrabble because apart from my love of language each game and each move is completely different trying to solving each problem is absorbing and uses a variety of mental functions that make the game pleasurable. It can be quite challenging working out what the key goals are on a move, and then finding the word that fits all the criteria. I also love matching wits on and away from the board with the community, without which the game wouldn't be as fun. I completed a Ph.D. at the University of Wollongong that looked at Scrabble players as an example of a community of practice which fosters learning in its participants, and it's amazing to see how the standard of play has gone up in recent years as more and more people learn the tools of experts and become experts themselves.

## **Brett Smitheram**

England

I'm a 38yr old headhunter for a London recruitment firm and have been playing Scrabble since I was 17. My Scrabble achievements include being World Scrabble Champion in 2016, UK National Champion in 2000, four times BMSC champion, Masters Champion, 6th in 2011 WSC and former no.1 in the world rankings.

I've always held a fascination for language, and Scrabble combines this fascination with the adrenaline rush of poker – there is nothing like working out you can only win if the only tile left in the bag is the blank... and then turning it over and knowing you've won. The Scrabble community has a great level of camaraderie on the whole, so it's great to be part of such a movement.



## **Geoff Thevenot**

USA

Scrabble achievements: 2nd in U.S. Nationals, 2006; WSC in 2007 (21st), 2009 (21st), and 2011 (16th) ; 4th in World Players Championship, 2008.

Why do I play Scrabble? I came to the game after reading Stefan Fatsis's book *Word Freak* years ago. I'd always had an affinity for words and games, and upon reading the book I decided to take my shot at becoming a strong tournament player. The journey has been and continues to be every bit as enjoyable and endlessly challenging as I had hoped.

What keeps me coming back, in addition to all the friends I've made and wonderful experiences I've had along the way, is that a game of Scrabble can pull my mind in so many different directions. It's a juggling act involving many facets of language, probability, strategy, board geometry, and even psychology. And you juggle all of these on the clock in one-on-one competition that so often has a thrilling, counterpunching feel to it, though ultimately you're testing your wits against the game itself. I could play this game every day for the rest of my life and not hope to come close to mastering it all. And that's how it should be!



## **Chris Lipe**

USA

I'm a 38 year old computer programmer for the US government. Why do I play Scrabble? Mostly for the fame and glamour. This seems unlikely, given that, you know, it's Scrabble, and you'd be right: seven years into my Scrabble career and I'm still toiling in relative obscurity, but it is much more likely that I'd turn the Scrabble thing into a reality TV show than some endeavour that I'm not good at. Scrabble is a great adventure: initially I got into it to test myself against the best, to see how far I could develop as a player. Today, that growth continues, but as well I've found the people in the game, all over the world, to be a great group of friends.

**Dave Koenig**  
USA

I grew up in New Jersey, USA, and played competitive chess from age eleven onwards, winning the state Elementary School Championship and twice the state High School Championship, and eventually attaining the rank of FIDE Master. After reading Stefan Fatsis's best-selling book *Word Freak* in 2002, I took up tournament Scrabble. I reached the expert rankings after about a year of tournament play and have won numerous tournaments. I represented USA in numerous events, including the 2016 and 2017 World Scrabble Championship, where I finished 9th and 11th respectively. I live in Seattle, WA and work as a computer programmer,



I play Scrabble because it's fun! I did a double major in college in Mathematics and Classics, and I see Scrabble as bringing together the precise calculation and beautiful logic of mathematics with the whimsical history and wonderful illogic of language.

**Edward Martin**  
England

I'm a 41 year old IT consultant, originally from London but now resident in Sweden with my wife and daughter. I've won quite a few tournaments at home and abroad and I represented England at the World Championship several times. My brother James is famous for an amazing numbers game on Countdown; worth looking up on YouTube. I play Scrabble for the competition, the excitement, and because I just do!



**Sumbul Siddiqui**  
England

Hi! I'm Sumbul, and I currently live in London, where I am studying Human Geography at Queen Mary University.

I've always been very passionate about words and spellings and Scrabble was the game to prove my passion for words. For me, Scrabble wasn't something new and I heard about it all the time, as I am the third generation of Scrabble.

It all started with a single game one Friday evening in 2010 and since then I play regularly and I'm very passionate about the game. I have played two World Youth Championships and now participate in World Championships. I am proud to be an ambassador for Mindsports Academy as I would love to see Mindsports grow worldwide and be recognised as a sport.



***"The secret of change is to focus all of your energy, not on fighting the old, but on building the new" -- Socrates***

## What's different about competitive Scrabble?

*"Family and friends learn that it's not such a good idea to ask how the Scrabble is going. In response, a serious player might launch into tales of his latest study regimen or tournament gaffe. Serious Scrabble is an acquired taste. The further into the game a player goes, the more removed he becomes from the parlour player's understanding of Scrabble. Only fellow loonies get it." - Paul McCarthy, Letterati*

When taking the first tentative step towards more serious Scrabble play, either by entering a local competition or turning up at a Scrabble club for the first time (as even experts once started out), a few things about formalised Scrabble play can come as a surprise. Let's have a look at some of the differences.

Friendly games of Scrabble with the family at Christmas might have involved three or four players, but competitive Scrabble is strictly a one-on-one activity. Increasing the number of players drastically increases the luck factor, as you are only allocated a small handful of the 100 tiles to play with, while more advanced strategic considerations such as tile tracking (more on this later) become impossible when more players are involved. Games with more than two players are also fairly boring, as you have to wait so long for your turn to come around. Out-of-hours games at Scrabble tournaments might see a team of two competing against one player, or perhaps two-against-two, but there are never more than two "sides" playing.

The penalty for playing an invalid word is always the loss of your turn, presuming that the opponent has been sensible enough to issue a challenge of your word. The responsibility for checking the validity of your opponent's words lies entirely with **you** and never with your opponent. The recent surge in popularity of online Scrabble games offering a "no challenge" mode in which words are checked automatically by a computer has made it more difficult for new players to become accustomed to checking questionable words played against them, but in reality it is an easy habit to get into, especially once you realise the painful consequences of failing to challenge.

There is no squabbling over whether a word should be allowed as one fixed word list is used to determine word validity. The word authority used in competitive games is *Collins Tournament and Club Word List (2015 edition)*; this is true for every country except for USA and Canada, which stick to a smaller, more localised word list. The Collins word list can be obtained in most bookshops, but to ensure that you have the correct edition, we recommend checking the Resources section for the correct ISBN numbers.

All tournaments and some clubs use timers (commonly known as clocks) to make sure that games are finished in a timely manner and one overlong match doesn't slow things down for everyone else. The standard time allowance is 25 minutes per player per game, meaning that most games last between 40-50 minutes. This might seem daunting at first but getting used to a game with the clock is only a matter of practice. It's not as hard as it first seems! Good time management is discussed in a later chapter.

Other than the differences above, you'll find that if you're playing competitively for the first time it's not much different to the game you've already known and loved for years. The only other difference is that nobody will chastise you for using obscure words. In fact, the more the merrier!

# Scrabble Skills

When most casual players encounter Scrabble, they classify it as a word game. Don't get me wrong: Scrabble is *definitely* a word game. But there's so much *more*. What makes Scrabble special is that it combines different strategic elements from different types of games to create the symphony that is Scrabble. To master Scrabble, you have to be well-versed in a variety of different skill sets.

## Word Game

Without a doubt, Scrabble is a word game, and is used in many countries as a tool to help people (especially young people) learn English. Scrabble as a word game is enjoyable for many as it allows people to encounter new words: a great experience for any word lover! Scrabble allows players to play and experiment with the weird, wacky, wonderful world of words that is the English language .

Scrabble also allows players to express their creativity with words in many different ways. Wordplay has always been prevalent within society, ranging from puns and rhymes to palindromes and word searches, but no word game has been more popular than anagramming. Unscrambling words has been a classic word game for millennia, featured in most newspapers across the globe, and is the primary skill in all of Scrabble.

## Puzzle Game

Knowing the words in itself is not enough! While Scrabble is indeed a word game, it's more accurately described as a sequence of word puzzles. In addition to finding words available in your rack, there's also the puzzle to find the various possibilities that exist on the board: whether you're playing through letters, making a parallel play, or forming a hook or extension. While some positions have no outstanding options, other positions contain one hidden but amazing option that makes the player go "aha!": solving the puzzle and finding that beloved needle within a haystack.

Scrabble also resembles a different type of puzzle game: the crossword puzzle. One of the most common challenges in Scrabble arises when one player needs to solve a crossword-style puzzle, for example, finding a word with the V in the third position, finding a bonus using a blank that ends in the letter T, or finding a parallel word that also forms several shorter two or three letter words.

These are the elements that make Scrabble the greatest game ever devised. Master these elements, and you too can be a Scrabble champion!

## Board Game

In addition to the word element of the game, Scrabble also has spatial elements, requiring players to manage the board. Not only are you trying to manage your tiles and score as many points as possible; you're also trying to manage the board, keeping scoring and bonus lines available if you're behind, blocking these options when you're ahead, and creating opportunities for your tiles on future turns.

The Scrabble board rewards you with multi-colour hotspots that can multiply the value of specific tiles or your entire play. This allows you to substantially power-up the values of the highest point tiles on your rack, rewarding you for playing certain tiles in certain locations. Scrabble's not about just finding the most sophisticated word or the longest word; it's about finding words that match the hotspots available on the board.

On the other hand, the 15x15 geometry of the board is big enough to use all 100 tiles in the bag, but small enough that players are still limited in their ability to play words, particularly long words, if their opponent chooses to be defensive. Players can opt to block bonus squares or limit various regions of the board, or choose to exhaust open areas making it difficult for their opponent to overtake a lead since playing a bonus will be extremely difficult.

## Strategy Game

In addition to finding words in your rack and words on the board, Scrabble is also about making decisions, based on several factors. How many points will I score next turn? How many points will my opponent score next turn? What tiles am I likely to draw? Where will I get to play? What tiles should I keep?

Scrabble requires many thought-provoking decisions, resembling other classic complex games such as chess, go, and poker. Scrabble requires using mathematics skills, iterative thinking, and other cognitive skills to analyze positions, accounting not just for the number of points you're scoring, but also blocking your opponent, the tiles remaining on your rack, managing risk, etc. Playing effective Scrabble requires juggling several factors in your head simultaneously.

It's not enough just to know the words. You also need to know *how* and *when* you deploy those words. You're the general, and the words are your army.

# Scoring at Scrabble

One bad habit that some new players have is that they focus too much on playing through open tiles. For example, when the opening play of VERSE is on the board, many players are very one-dimensional: they simply see two Es, an R, an S, and a V to play through. In doing so, they often miss out on points, as they are overlooking some of the other ways that they could score points...

Scrabble isn't just anagramming: it's also learning how to find plays that score points. It's not about finding the flashiest play: it's about finding the play that's going to lead to you outscoring your opponent, and that means finding the various options available to you over a Scrabble board. Learning how to spot these plays is essential to your Scrabble success.

Here are some of the types of plays that will enable you to score big at Scrabble:

## Parallel Play

A parallel play is a word that is played alongside another word, forming a bunch of short words (usually two or three letter words) in the process. Parallel plays are the very reason why learning these short words are so important: learning words like QI, ZA, XU, ZO, JA, and JO are essential for any Scrabble player. Using parallel plays effectively requires having a mastery of the two and three letter words. This allows even short words to be counted twice (one in each direction) and magnifies the value of high point tiles on premium squares, which can be multiplied in both directions.



In this position, by knowing the word AYU (a Japanese fish) a player can make a short parallel play such as ZAP (forming ZAG, AYU, and PEE) or JAR (forming JAG, AYU, and REE). With even better parallels you can make an even longer play, perhaps for a bonus with a play such as DAMAGED (forming APO, MAG, AYU, GEE, and ER) or PARADES (forming APO, RAG, AYU, DEE, and ER). These are just some of the ways that parallel plays can help you score.

## Hooks

Hooks are letters that can be placed at the beginning or end of words, forming a new word while also allowing you to make a perpendicular play, scoring lots of points. While the most common hook by far is the S (ending words), most tiles can serve as hook tiles and potentially lead to high scoring plays, especially in TWS alleys. Hooks that begin words are *front hooks* while hooks that end words are called *back hooks*.

10		3L			R
11					P
12	2L	R	U	S	H
13			2W		
14		2W			
15	3W			2L	

In this case, there are two front hook letters (B-RUSH and C-RUSH) which will allow you to play a 4 letter word for big points, using the 2L and 3W hotspots.

## Extensions

Extensions are much rarer than hooks or parallels, but are still a potentially lucrative scoring option. Extensions take an existing word and make them longer, usually by adding a prefix or suffix to a word (such as over- or -able), or by creating a compound word (such as key-word or word-smith). While these plays might not show up too much, it's a flashy way of scoring a lot of points especially when they reach 2W or 3W squares.

2L				T			2L
	2L			E	2W		
		3L		L		2W	
3W				Y	A	R	D

In this case, the word YARD can be preceded by a number of 4 letter extensions, including BACK, BOAT, VINE, and JUNK, all of which reach the 3W square and score quite well.

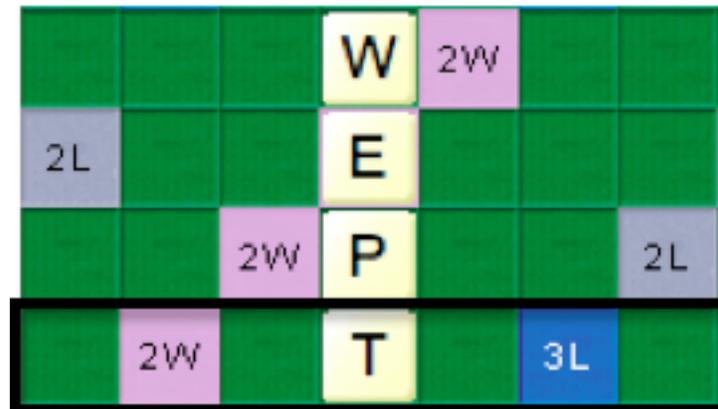
It's worth noting that many people spend far too much energy and sacrifice far too many points trying to hit extensions. While playing an extension might be worthwhile, making a low scoring play in hopes of playing an extension next turn is usually not.

## Hotspot Combinations

While playing through letters to form a single word might be overdone by new players, it can still be an effect way to score, especially when there are multiple hotspots involved. Hotspots can multiply high point letters several times over, increasing your ability to score points.

Some hotspot combinations do not require fixing individual letters to specific locations. Double Word combinations can be found 7 letters apart and let you multiply your entire word's value by 4. And of course, there's the elusive 3W-3W combination (also known as a nine-timer) on the outermost layer of the board, providing you with a 2L as well and multiplying your word by nine, leading to 100+ (and occasionally even 200+) point plays!

However, most hotspot combinations usually involve both a word multiplier and a letter multiplier, forcing you to put a high point letter in a specific spot. While this can easily result in high scores, at times this requires a bit of mental gymnastics, forcing a player to think to themselves "What words can work if we force these letters into these spots?"



**Rack: ACEIOPV**

In this situation, we wish to force a high scoring tile onto the 3L square, while also having at least one letter cover the 2W square, maximising our score. Thus, we should first start by looking for \_\_T\_V\_ words, and surmise that the letter after the V must likely be an E. Doing so allows us to find the words ACTIVE and OCTAVE as possibilities.

Likewise, we can do the same for the C. Looking at words putting the C on the 3L square, we can thus look at \_\_TIC words and can see OPTIC and POETIC as possibilities. (VATIC is also a possibility.) All of these words score 30+ points!

## Exercise 1

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
1	3W			2L				3W				2L			3W	
2		2W				3L				3L				2W		
3			2W				2L		2L					2W		
4	2L			2W				2L					2W		2L	
5					2W							2W				
6		3L				3L				3L					3L	
7			2L				2L		2L					2L		
8	3W			2L				U				2L			3W	
9			2L				2L	R	2L				2L			
10		3L				3L		A		3L					3L	
11					C	A	M	E	O	I	N	G				
12	2L	B	I	M	A			M					O	V	A	2L
13			2W		R	A	D	I	A	L	E			2W		
14		2W				B	O	A	T	3L					2W	
15	3W			2L	W	A	Y	S					2L		3W	

Rack: AEHLLRZ

Take a look at this position. While there are not a lot of good letters to play through (the A in column n and the I in column c are the best letters to play through) there are a myriad of opportunities to score points with your rack. There is an L hook at o12 which will allow you to play HAZEL. There's an open parallel lane on row 10 that will allow you to play ZEAL 10f, forming ZA, EM, and LO. There's an extension at row 15, allowing you to extend WAYS into HALLWAYS. Finally, there's a hotspot combination in column b, allowing you to turn the B into ZEBRA. All of these plays will score over 50 points!

In the next two positions, it's going to be your turn to take a try! In both positions, there will be four racks presented: a parallel play, a hook, an extension, and a hotspot combination. Test your skills in finding the best play!

## Exercise 2

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W		T		3L				3L				2W	
3			2W	R			2L		2L				2W		
4	2L			I				F	L	O	A	T	E	R	S
5				B	H	A	J	I			2W				E
6		3L		E		G	A	L		3L				3L	Q
7			2L				2L	L	2L				2L		U
8	3W			2L				E				2L			E
9			2L				2L	T	2L				2L		N
10		3L				3L				3L				3L	C
11					2W						2W			W	E
12	2L			2W			2L					2W		O	2L
13			2W				2L		2L				2W	R	
14		2W				3L				3L				T	
15	3W			2L				3W				2L			3W

Rack 1: AABLMMU (Parallel play)  
 Rack 2: FHILNTY (Hook)  
 Rack 3: AEIKOTU (Hotspot combination)  
 Rack 4: AACNNOR (Extension)

Answers will be on the next page. Hints are below.

- Hint 1: ABLMU makes a 5 letter word that plays in row 3  
 Hint 2: Don't use the N.  
 Hint 3: Look for a 3 letter prefix. Use in conjunction with your other tiles.  
 Hint 4: Try to extend the word SEQUENCE.

### Exercise 3

1	3W			2L				3W				2L			3W
2		2W				3L				3L					Z
3			2W				2L		2L					H	E
4	2L			2W				2L					F	E	E
5					T	U	L	L	E		B	O	D		
6		3L		G	I	P			T	H	O	U	G	H	
7			2L		M	O	V	E	2L		O		E		
8	3W			2L	E			S	I	L	K	Y			3W
9			2L		O		2L		2L	A			2L		
10		3L			U	3L				Y				3L	
11					T							2W			
12	2L			2W				2L				2W			2L
13			2W				2L		2L				2W		
14		2W				3L				3L				2W	
15	3W			2L				3W				2L			3W

Rack 1: DIOQRRW  
 Rack 2: DEILRTW  
 Rack 3: DIINRRV  
 Rack 4: CIMORRW

Answers to previous page:  
 Rack 1: ALBUM 3i (39)  
 Rack 2: FILTHY 15j (59)  
 Rack 3: OUTTAKE 2a (42)  
 Rack 4: CONSEQUENCe o1 (66)

Answers to this page:  
 Rack 1: WORD o1 (57)  
 Rack 2: TWIRLED o6 (103)  
 Rack 3: DRIVEN 8a (48)  
 Rack 4: BOOKWORM k5 (48)

# Understanding the Words

When it comes to Scrabble, there's only one book that really matters: the dictionary. This book will become your best friend: master this book and you'll beat the vast majority of your opponents consistently.

If you're a Scrabble player, you'll want to embrace the CSW (Collins Official Word List) dictionary. Everything in our game stems from this book, which contains every playable word in the game of Scrabble. This book is updated approximately every five years in an attempt by a dictionary committee to keep up to date with the current vernacular.

CSW is an unabridged dictionary, and reflects English as it is spoken around the world, even in countries where English is not a first language. As a result, the dictionary contains well over 200,000 words, including over 100,000 2-8 letter words.

In its true form, CSW exists as a list of words, without definitions or context, and is used primarily to check words. Players rarely use CSW to learn words, and most players instead use software to learn instead. (Scrabble software will be discussed in a later section.)

While other dictionaries exist, CSW is the most widely accepted dictionary around the world. (The only major exception is in North America, where most players use the TWL lexicon. I suppose this goes with America still not embracing the metric system...)

## Do definitions matter?

When most people play Scrabble, they do so with definitions in mind. It's a common house rule that you can "only play a word if you know what it means". For many casual players, learning the words without the definitions misses the very point of the game: to learn and celebrate the English language.

However, in tournament Scrabble, most players view the game differently. Because of the sheer size of the dictionary, it is nearly impossible to learn the meaning of every word. The world is simply too expansive to learn every plant in the forest or every scientific term. For this reason, most players choose to look at words as instruments that help them score. For some serious players, learning the definition makes word learning too slow of a process.

For these people, words are instead learned via word list in order of their usefulness within Scrabble. It's nearly impossible to be proficient at Scrabble without learning the two and three letter words (these words with definitions are in the appendix). Vowel-heavy words such as EUOI are very useful, as are high-probability bonuses such as ETAERIO and high-point JQXZ words like JURA, QAID, IXIA, and ZOEAL. These words (and others) must be acquired early in one's Scrabble journey: with or without the definitions.

Learning words with definitions (and not just a word list) will undoubtedly slow down the process of word study, but for some people, it's worth it. At a minimum, knowing the part of speech can help recall which hooks and inflections are allowed (e.g., -S, -ED, -ING, -IEST). And if definitions allow you to derive the maximum pleasure from the game, then by all means, do it! But learning definitions is not a necessity, and in fact, most tournament players don't bother. For most, learning the definition alongside the word requires too much effort and isn't worthwhile.

The choice is yours!

## **What Types of Words are Allowed?**

One of the great frustrations for many players is knowing what type of words are allowed and not allowed in the CSW dictionary. While it's true that the only real way to know for sure is to look it up, many people are still frustrated at their lack of intuition to guide them as to whether or not they can play specific words. To alleviate this frustration, here are some guidelines as to the type of words that are and aren't allowed:

### **ALLOWED:**

Swear words and derogatory words (FUCK, JEW, BIMBO, etc.)

Letters of various languages (XI, ESS, etc.)

Expressions and interjections (PHPHT, SHH, BRRR, etc.)

Alternate spellings, if common enough (GONOF, MUZJIK, etc.)

### **NOT ALLOWED:**

Non-generic brand names (NIKE\*, MARLBORO\*, etc.)

Geography or nationalities (IRISH\*, AFRICAN\*, MEXICO\* etc.)

Surnames (THOMAS\*, ANDERSON\*)

Foreign words not assimilated into English (EINS\*, HUIT\*, UNO\*)

Abbreviations (YOLO\*, TV\*, OJ\*, etc.)

Hyphenated words (TWENTYTHREE\*, PROLIFE\*, etc.)

### **SOMETIMES ALLOWED:**

Common foreign words (those that are "assimilated" are allowed, but those that aren't used enough are left out: for example, ADIOS is acceptable, but BONJOUR\* is not)

Scientific terms (chemicals, plants, wind patterns, etc.)

Slang

# Word Learning

Andrew Fisher

*“To play competitive Scrabble, one has to get over the conceit of refusing to acknowledge certain words as real and accept that the game requires learning words that may not have any outside utility. In the living room, Scrabble is about who has a better working vocabulary. It’s a sort of crossword puzzle in reverse. But in the tournament room, Scrabble has nothing to do with vocabulary. If it did, I – an Ivy League educated professional journalist, for crying out loud – would rule. But I can only dream of competing with the champions. No, Scrabble isn’t about words. It’s about mastering the rules of the game, and the words are the rules.” - Stefan Fatsis, Word Freak*

The sheer number of valid Scrabble words listed in CSW15 may seem horrendously daunting to a beginner. This chapter will show you how to focus on the more important words, so that even with fairly minimal effort you can become a contender.

If you want to aim at complete mastery of the lexicon up to eight letters in length, you will need to know about 119,000 different words. Here’s how they are broken down:

Length	Words	Percentage
2	124	0.1%
3	1,341	1.13%
4	5,625	4.73%
5	12,917	10.85%
6	22,938	19.28%
7	34,171	28.72%
8	41,883	35.20%
<b>Total</b>	<b>118,999</b>	<b>100.00%</b>

Fortunately, you do not need to learn them all from scratch to play a highly effective Scrabble game. In fact, the working vocabulary needed to play a very competent game of competitive Scrabble is surprisingly small, with most new players finding that the gradual learning of up to 2,000 select words makes an enormous difference to every game. In just the same way as you can easily carry on a conversation about soap operas or sociology using a word stock of just a few hundred common words, you can get by in Scrabble with a smallish set of basic building blocks that come up time and again. So which words do Scrabble players learn, and why?



## Two-letter words

First things first, the ideal place to start is the two-letter words. These are strategically the most important to know, because they permit the crucial parallel plays and overlaps that advance your score. For instance, it is not much good seeing the bonus MERRILY on your rack if you are unaware that it can be played alongside a K to make KY.

Here they are:

AA	AY	EA	FY	IO	MA	OD	PA	TE	XI
AB		ED		IS	ME	OE	PE	TI	XU
AD	BA	EE	GI	IT	MI	OF	PI	TO	
AE	BE	EF	GO		MM	OH	PO		YA
AG	BI	EH	GU	JA	MO	OI		UG	YE
AH	BO	EL		JO	MU	OM	QI	UH	YO
AI	BY	EM	HA		MY	ON		UM	YU
AL		EN	HE	KA		OO	RE	UN	
AM	CH	ER	HI	KI	NA	OP		UP	ZA
AN		ES	HM	KO	NE	OR	SH	UR	ZO
AR	DA	ET	HO	KY	NO	OS	SI	US	
AS	DE	EX			NU	OU	SO	UT	
AT	DI		ID	LA	NY	OW	ST		
AW	DO	FA	IF	LI		OX		WE	
AX		FE	IN	LO	OB	OY	TA	WO	

There are not that many to learn, and most aspiring players can master the twos in short order. We touch on learning techniques elsewhere, but as far as the twos are concerned a great number are already everyday words so do not demand particular effort.

It might help to check out the definitions for these very short words – for instance, knowing that AA is a kind of lava seems to help with recall. Or you can try mnemonic tricks, such as the fact that M can precede every vowel; or attempt to memorise subsets such as the Greek letters as a group (MU, NU, PI, XI) or the all-consonant twos (CH, HM, MM, SH, ST). Any focused effort on your own part to analyse the twos will help them stick; otherwise, these words come up so often that it is straightforward to fix them, and they will soon become second nature. Note that the Appendix contains full lists of all 2s and 3s with definitions provided as a memory aid.

Scoring with overlaps is a very important part of Scrabble, and this technique can often squeeze maximal points from a dull-looking rack. The following simple opening position illustrates this; say your opponent has started with AGEE and you hold AADEGMO:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
6		3L				3L				3L				3L	
7			2L				2L		2L				2L		
8	3W			2L		A	G	E	E			2L			3W
9			2L				2L		2L				2L		
10		3L				3L				3L				3L	

You can score strongly with overlaps, making multiple two-letter words:

- ⤴ GOAD (9f) plays for 23 points, leaving AEM. This makes use of AG, GO, EA and ED.
- ⤴ DAMAGE (7f) plays for 26 points, leaving O. This makes use of DA, AG, ME and AE.
- ⤴ OMEGA (9g) plays for 21 points, leaving AD. This makes use of GO, EM and EE.

20-odd points is hardly spectacular, but in this case it makes the most of your rack by doubling up the points from all the overlaps. The technique comes up time and again, meaning that you simply have to know all the twos to play an effective game.

At this point we must mention the most frequently played word of all, the magnificent QI. As the Q rears its head in every game of Scrabble, very often it is easiest to dump it together with an I (computer analyses have shown that QI has a clear lead as most common word, being played as a main word over 4.2 times as frequently as the second most popular two, XI. That's a lot of QIS).

As an aside, U-less Q words may themselves repay individual study: it is rarely worthwhile to hang on to a U, and yet you will draw the Q in about 50% of your games. Here is a list of all such words up to eight letters:

BUQSHAs	NIQABs	QALAMDANs	QIGONGs	QWERTYs	TZADDIQs
BURQAs	QABALAs	QAMUTIKs	QINs	QWERTIES	TZADDIQIM
CINQs	QABALAHs	QANATs	QINDARs	SHEQALIM	UMIAQs
FAQIRs	QABALISMs	QASIDAs	QINDARKA	SHEQELs	WAQFs
FIQHs	QABALISTs	QATs	QINTARKA	SUQs	YAQONAs
INQILABs	QADIs	QAWWALs	QINTARs	TALAQs	
KAMOTIQs	QAIDs	QAWWALIs	QIVIUTs	TRANQs	
MBAQANGAs	QAIMAQAMs	QIs	QOPHs	TSADDIQs	
NIQAABs	QAJAQs	QIBLAs	QORMAs	TSADDIQIM	

A number of these words will show up below in the list of top fours and fives by playability order, indicating their utility for dealing with a difficult tile.

### Three-letter words

Next on your learning agenda should be the two-to-three hooks. Because twos come up so often, it is well worth knowing what goes before or after them – you may not get to play MERRILY unless you know that ABY or YUG, for instance, exist (hooking AB and UG). At the same time, overlaps involving extensions to twos can score very heavily. Assuming OMEGA had been chosen in the game below and you hold ABDDKRT – what can you do?

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
6		3L				3L				3L				3L	
7			2L				2L		2L				2L		
8	3W			2L		A	G	E	E			2L			3W
9			2L				O	M	E	G	A		2L		
10		3L				3L				3L					3L

It isn't possible to make a five-letter word which reaches to the TWS at (o8), so the best course seems to be moves from (7f) such as BARD 30pts (making BA, AGO, REM and DEE), KART 30pts (KA, AGO, REM and TEE) or the less familiar DARB 32pts (DA, AGO, REM and REE). Once again these advance your score handily thanks to the multiple overlaps, and a solid knowledge of the hooks will really help your game.

You'll see QIN turning up all the time. Taking this a little further, it is well worth knowing all the threes (even the rarities such as ZUZ, which come up hardly ever because there is only one Z in the set). This is because they can allow you to fit a particular group of letters onto the board to best advantage, with the intention of keeping back a good rack leave. Let us say you wished to deploy the letters L/M/Y on the above board to get rid of some surplus consonants: it would be really useful to know that LYM is a word, and can be slotted at (7f) to make LA, YGO and MEM for a splendid 32-point haul.

Learning the threes takes a little more effort than the twos, although most of them come up fairly often in play. Reading through the list a few times is a good starting point; you may also wish to explore the definitions, or attempt some mnemonic techniques. For example, you could memorise the end-hooks to AD by thinking of an advertisement for DZOS (which confirms ADD, ADZ, ADO and ADS; in case you didn't realise, DZO is a very common three, a variant form of the infamous ZO, a cross between a yak and a cow). Grouping the words into sets can also be helpful – try and find patterns that you will be able to recall, or match up the words using the same letters such as KIS/SIK/SKI, or BOR/BRO/ORB/ROB.

Learn the words actively as you read the lists – look for connections, pick up on the 'surprising' letter combos like CWM, imagine how each word could be played. Just scanning the words in isolation or without any conscious effort won't really help with memorisation.

Once you've learned these words, a good technique for testing your knowledge is simply to write down a sequence of threes with given parameters. You could choose to list all threes starting and ending with H, for example, and then check to see what you missed.

### Bonus words

Twos and threes are highly important, but a good Scrabble player will also aim to bonus as many times as possible in a game. Bonus words give you the fifty-point bonus that can quickly put you out of your opponent's reach, and at this stage in the learning process it will be worth picking up some of the most likely candidates.

Single-point tiles are the most frequent because they represent the most common letters (e.g. there are twelve E's in the set), making it likely that the majority of bonuses will have a relatively low face value. Consequently most players tend to study bonuses in probability order, because the most likely letter combinations will



come up time and again – consider AEINORT, for example, which permits NOTAIRE or OTARINE. Hardly everyday words, but as the letters are so likely to be drawn from the bag (or kept, if the player is managing their rack leave), you will see them frequently on an expert-level Scrabble board.

Short words with heavy letters tend to be good for racking up mid-sized scores, while bonuses are good for maximising the power of the lower-value tiles. The value of studying in probability order is made plain by an analysis of just how often the top bonuses recur: the startling truth is that learning only 1000 or so sevens and eights will deliver you about 10% of bonuses that actually appear, because words like ANEROID, GOATIER, AERATION and ETAERIOS are played so frequently.

Putting that into context, there are about 74,000 sevens and eights, so the most powerful 1000 of them constitutes a mere 1.35% of the total. All developing Scrabble players need to have these bread-and-butter bonuses in their armoury, so you might as well start there.

It's also worth knowing that if you can get through 20% of the sevens and eights (say 15,000 words in total), these will give you about 50% of bonuses as actually played in games.

By the way, sevens and eights come up equally often in computer-simulated games (in fact eights have a slight edge consistent with their greater force of numbers), so don't focus on one set to the exclusion of the other – possibly sevens are easier to learn, but don't neglect the eights.

Bonus lists in probability order are easily generated with software such as Zyzzyva, but here is a taste of the top 10 most useful letter-sets for each length:

### Sevens

- 1 AEINORT = NOTAIRE, OTARINE
- 2 AEEIORT = ETAERIO
- 3 ADEINOR = ANEROID
- 4 AEILNOR = AILERON, ALERION, ALIENOR
- 5 AEILNOT = ELATION, TOENAIL
- 6 AEINORS = ERASION
- 7 AEINOST = ATONIES
- 8 AEIORST = OARIEST, OTARIES, ROASTIE
- 9 AEEINRT = ARENITE, RETINAE, TRAINEE
- 10 AEGINOR = ORIGANE

### Eights

- 1 ADEINORT = AROINTEDE, DERATION, ORDINATE, RATIONED
- 2 AEILNORT = ORIENTAL, RELATION, TAILERON
- 3 AEINORST = ANOESTRI, ARSONITE, NOTAIRES, NOTARIES, NOTARISE, ROSINATE, SENORITA
- 4 AAEINORT = AERATION
- 5 AEEILORT = AEROLITE
- 6 AEEIORST = ETAERIOS
- 7 ADEILNOT = DELATION
- 8 ADEILORT = IDOLATER, TAILORED
- 9 ADEINORS = ANEROIDS, ANODISER, DONARIES
- 10 ADEINORU = DOUANIER



That makes forty words for the price of twenty letter-sets, all of them potentially very useful. And you shouldn't worry too much if you have difficulty remembering all seven solutions for AEINORST

– if you can get even one of them on the board, you've done well (and quite often, the board position will suggest something to you, even if you don't always reproduce it in the course of a study session). Of course, there are a lot of very familiar words among them, so it is hardly necessary to 'learn' TAILORED or ELATION, but study will help you unravel the solution swiftly when you get the right letters.

Now that you have identified a preliminary set of words to learn, it is a matter of finding the best way of doing so. Studying in manageable chunks of data will make it easier, and far less daunting, than trying to master the whole dictionary in one bite. Once you have got a good handle on the first 1000 bonuses, your game will improve exponentially, and that may well give you the motivation to move onto the next 1000, and then the next 1000... if you find a thousand at a time too daunting then ask Zyzzyva for the first 500 and then the next 500 and so on. It is far better to know a small sample of words thoroughly than to attempt to learn too much at once and end up with only 80% accurate knowledge of a larger sample.

Most of the top Scrabble players use Zyzzyva for word study, generally setting it to pose a series of anagrams to which the player finds the solution (either typing it in, or finding it mentally before flicking to the next screen). It's similar to a set of manual flashcards which have the 'alphagram' (e.g. AEINRST) on one side with the solution(s) on the other, but less time-consuming to set up. Prior to major tournaments such as the World Championship, you will commonly see players rehearsing a rapid-fire series of Zyzzyva quizzes to warm themselves up.

The Zyzzyva preferences settings can deliver the quiz in alphabetical order, or with vowels or consonants first if preferred, or even in random order if that's the way you like to do it. Some players therefore always rearrange their racks into alphabetical order during a game to mimic their study method, while others seem to do better with letters placed haphazardly as they are drawn (including sideways or upside-down, in some cases).

Here are a number of ways of learning bonuses:

- Stem-based study. It is well known that certain stems of six or seven letters are very fruitful for generating bonuses, classic cases including AEINST and AEINRT. You can confidently fish to those leaves (i.e. play off the other tiles, usually for a low score) and guarantee a bonus play most of the time, because they combine with almost every possible letter to make a seven (the research is left to the reader). This can help with recall, and some players can reel off the whole set of possible bonuses; but beware of changes with dictionary updates.
- Study of bonuses with (1) one-point tiles only, e.g. AINSELL, USTIONS, REENLIST and UNITRUST; (2) one- and two-pointers only, e.g. ADENINE and RUNAGATE; (3) one-pointers with a single high-value tile, e.g. AIRLIKE and ALEHOUSE.
- Study from smaller stems, e.g. TRAIN + 2 for sevens, or TRAINS + 2 for eights (yielding beauties such as CANTRIP, WAITRON, STINGRAY and TRAHISON).
- Study in pictorial groups or mind maps, perhaps with a common letter-pattern such as the CAT words (CATFACE, CATTAIL, CATBOAT, SALTCAT, BEARCAT etc.).
- Sub-words from longer sets, e.g. all sevens and eights from your surname or town of residence plus a blank (e.g. ROCHDALE plus a blank, limited to sevens and eights can give you ARCHFOE, CHALDRON, ORCHELLA etc.).

Any other scheme that you devise yourself is likely to be at least as fruitful as the above, because your own involvement in the research helps the words lodge in the brain.

Learning a list of words generated using a specified criteria, such as any of those described above, will also give you the advantage of knowing when not to waste time looking for a bonus from an infertile rack. For example if you have learned the RETAIN+1 bonus set and are faced with a rack of AAEINRT, you will be confident that there is no seven-letter word and that you should search for floating letters for an eight-letter word instead. Knowing when there isn't a word in a particular rack can be as valuable as knowing when there is.



*Scrabble players lie awake at night imagining once-in-a-lifetime moves such as KOFFGARI*

At this stage, it is worth emphasising the import of 'learning' a word. It isn't just a case of recognising something that is played against you – you actually have to identify and unravel it from the random jumble of letters on your rack. For example, you wouldn't baulk if your opponent played STOMACH or BOUDOIR against you, but would you have found the bonuses from ACHMOST and BDIOORU?

This mindset can help you solve the anagrams that lead to everyday words, but which are actually fairly hard to find when presented cold. For instance, it would be easy to miss the words from the sets below, and you generally have to study them beforehand (the solutions are not given here, but if you know there is something to be found it might help):

CEINNOTU

EILORRTU

ENOORSU

So much for bonus words, though mastering the lot of them could take a lifetime. But if you do no more than learn the twos, threes and a few top bonuses, you will have the tools to perform very creditably in Scrabble tournaments.

### Heavy fours and fives

Next on the list should be a selection of words featuring the really heavy tiles J, Q, X and Z. If you already know the twos and threes, the first port of call should be the fours featuring those letters.

Once again, breaking these words down into small batches will help the learning process. As an example, all 145 fours including the letter J are as follows:

- |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|
| AJAR | HAJI | JAKS | JASS | JEAT | JEON | JIFF | JIVY | JOKY | JOTS |
| AJEE | HAJJ | JAMB | JASY | JEDI | JERK | JIGS | JIZZ | JOLE | JOUK |
| AJIS | JAAP | JAMS | JATO | JEED | JESS | JILL | JOBE | JOLL | JOUR |
| BAJU | JABS | JANE | JAUK | JEEL | JEST | JILT | JOBS | JOLS | JOWL |
| BENJ | JACK | JANN | JAUP | JEEP | JETE | JIMP | JOCK | JOLT | JOWS |
| DJIN | JADE | JAPE | JAVA | JEER | JETS | JINK | JOCO | JOMO | JOYS |
| DOJO | Jafa | JAPS | JAWS | JEES | JEUX | JINN | JOES | JONG | JUBA |
| FUJI | JAGA | JARK | JAXY | JEEZ | JEWS | JINS | JOEY | JOOK | JUBE |
| GAJO | JAGG | JARL | JAYS | JEFE | JIAO | JINX | JOGS | JORS | JUCO |
| GJUS | JAGS | JARP | JAZY | JEFF | JIBB | JIRD | JOHN | JOSH | JUDO |
| GOJI | JAIL | JARS | JAZZ | JEHU | JIBE | JISM | JOIN | JOSS | JUDS |
| HADJ | JAKE | JASP | JEAN | JELL | JIBS | JIVE | JOKE | JOTA | JUDY |

JUGA    JUKE    JUNK    JURE    JUTE    JYNX    PUJA    SIJO    SOJU  
 JUGS    JUKU    JUPE    JURY    JUTS    KOJI    RAJA    SJOE  
 JUJU    JUMP    JURA    JUST    JUVE    MOJO    ROJI    SOJA

The ones including common letters (e.g. JEAT, JOTA and ROJI) are frequently seen and well worth knowing. You'll also find that the hooks to three-letter words can be useful, such as the front S-hook to JOE, making SJOE, and the surprising J terminal hook to BEN, making BENJ. Similar considerations apply to the Q, X and Z words in this category, and it is very pleasurable to slot in a high-scoring XRAY, QUEP or MZEE when the chance arises.

Getting a toehold into the fours with the heavy tiles is a great platform to take it further. Just as the 2-to-3 hooks are important, so it is advisable to get a solid grasp of the 3-4 hooks first, and then gradually tick off the rest. Yes, there are 5,500 of them, but the more you know, the better you will do. Consider the geography of the board – in all of the places highlighted below, a four-letter word is very well placed to capitalise on double hotspots (the same applies both across and down):



Fours are also fabulous as vowel dumps, and you should pick up on beauties like EINA, EUOI, IURE and many others to massage the rack leave as desired.

If you are well advanced in study of fours, the next step is obviously the fives. These have an even greater capacity for hitting two premium squares, and in fact the board is riddled with them (showing only one side and orientation to avoid crossovers):

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W				3L				3L					2W
3			2W				2L		2L					2W	
4	2L			2W				2L					2W		2L
5					2W							2W			
6		3L				3L				3L					3L
7			2L				2L		2L					2L	
8	3W			2L				★					2L		3W
9			2L				2L		2L					2L	
10		3L				3L				3L					3L
11					2W								2W		
12	2L			2W				2L					2W		2L
13			2W				2L		2L					2W	
14		2W				3L				3L					2W
15	3W			2L				3W					2L		3W

Fives, of course, also cover all the best spots for fours, so the potential for scoring is immense, particularly using those with heavy tiles in the appropriate locations.

Learning fours and fives can be approached in much the same way. Unlike bonuses, the priority is not to keep compatible low-value tiles for deploying as fours or fives; the focus is rather on maximising the potential of your scoring tiles, or dumping unneeded letters such as excess vowels. Probability order would mean you are faced with sets like AERST to learn in priority to others, whereas the reality is you are hardly ever going to play that set as a five-letter word – so it isn't worth getting hung up about STRAE or its absurd number of playable variants.

Instead, the way to go is *playability order*. This is defined in terms of the utility of each word in actual play, or how much damage it does (in terms of points and leave) if you overlook it. The original data was collected by John O’Laughlin in countless numbers of computer-vs-computer matchups, using a comparison of the ‘best’ play, the ‘second-best’ play and the quantum of points sacrificed if the latter were chosen instead (of course, this relies on the assumption that you can know what the best play is). It measures to what extent, on average, one candidate is better than another – hence words with heavy tiles come to the fore, as indeed do vowel dumps. You will also find that words with minimal numbers of anagrams generally appear higher than words with multiple siblings, because it can be statistically important to play off just the right combination of letters. Hence words like MIRV, FILII or GUQIN are rather less likely to appear on your rack than words like NERAL, but they are far more likely to be candidates for the optimal play.

Fortunately, the data is built into Zyzzyva, which makes it much easier to generate suitable lists. As a taster, the top 20 fours and fives by playability order are set out below:

- |      |       |
|------|-------|
| EUOI | TRANQ |
| QINS | AIYEE |
| QADI | QANAT |
| QAID | AUDIO |
| QATS | ZOEAE |
| CINQ | AIOLI |
| JIAO | AINEE |

AWEE	FAQIR
AVOW	NIQAB
AJEE	OUIJA
HIOI	QORMA
AQUA	TALAQ
IXIA	CINQS
QUAI	YITIE
EVOE	BOOAI
WEXE	AQUAE
AGIO	OORIE
EXON	QADIS
OHIA	ADIEU
OGEE	AIDOI

Notice the preponderance of heavy tiles, vowel dumps and incompatible letters among the selection. Studying shorter words in playability order is therefore more useful, and considerably more interesting, than looking at probability order. You can be forgiven for not getting through all 12,646 fives (notwithstanding your good intentions), so it makes sense to look at the really useful ones first.

You can also create your own lists of words you feel are going to be most useful; doing this may itself help the words stick. For example, you could generate the top fours and fives by playability which exclude E, S, J, Q, X and Z, giving you a useful word list which includes PIKA, DOLIA, THOWL, ROARY, TUATH, INULA, BUBA, CYANO, TROP, UNBAG, KNAR, AYONT and so forth (nicknamed the “ugly list” by top USA player Scott Appel).

As with other lists for study, you should be looking for memorable connections between words, or combinations that stand out for particular reasons, and trying to maximise the active learning process. Regular repetition will, as always, be beneficial.

### **Six-letter words**

Sixes are still a relatively obscure field of study, even among top-flight players. Perhaps this is because they don’t offer any additional opportunity to hit two hotspots when compared to fives, and also because they can turn over too many tiles, effectively delivering you a random rack on the next draw but without the 50-point bonus. However, there are of course many very useful words among the sixes, and a quick scan of the high-playability words will throw up gems like TAUWI, AEONIC and WAIRUA.

### **Hooks**

You might think that if you go through all the fours and fives, you will naturally pick up on the hooks to threes and fours among them. In fact, it is also worth studying hooks as a separate exercise. This is because they can be hard to spot over the board – consider the innocent BLED, for example. Unless you study the hooks specifically, it is so easy to miss the A-hook (ABLED). There are many comparable examples, and looking at the hooks is also a good way to make headway into the next group of words by length.

Consider anew this board from earlier in the section. AGEE is an adverb meaning ‘to one side’, but students of hooks will be aware that it takes a front R (RAGEE is a kind of cereal grass). Well worth knowing when you have the otherwise unplayable HAYRICK on your rack.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W				3L				3L				2W	
3			2W				2L		2L				2W		
4	2L			2W				2L				2W			2L
5					2W						2W				
6		3L				3L				3L					3L
7			2L				2L		2L				2L		
8	3W			2L		A	G	E	E			2L			3W
9			2L				O	M	E	G	A		2L		
10		3L				3L				3L					3L
11					2W						2W				
12	2L			2W				2L				2W			2L
13			2W				2L		2L				2W		
14		2W				3L				3L				2W	
15	3W			2L				3W				2L			3W

Regrettably, there is no real substitute for consistent and in-depth word study if you want to become a top player. People who are attracted to top-flight Scrabble may have the necessary (slightly obsessive) self-discipline which enables them to spend hours reviewing words, and if you don't have an appetite for this you could struggle to make headway. The best way is to review the chosen list in an attempt to learn it, and then test yourself again and again until it starts to stick. But the satisfaction of uncorking the fruits of your word study over the board is hard to beat.

In summary, learning the huge number of words in Collins is an almighty task, but it can be made easier by approaching it in a systematic way and chunking the data into small segments. If you want to become proficient at Scrabble you will have to start learning words, and every little segment you review will add to your knowledge, and eventually knit together as an ever-expanding patchwork quilt in your repository of tools for the game (if we are permitted to mix oranges, haberdashery and ironmongery into one metaphor).

# Why Scrabble Strategy Matters

Some people wonder why we care about Scrabble strategy at all. After all, Scrabble is supposed to be a *game*, or so they say. "Why should I care about strategy?" they ask. "I win plenty just by finding the highest scoring word. There's no real strategy in Scrabble."



Luckily, there *is* some complex strategy in Scrabble. I've heard this no-strategy myth from a lot of people: some of them are actually pretty good players. With that, I've decided to come up with the reasons why learning Scrabble strategy matters:

1. Strategy opens up a new layer of Scrabble that is fun and interesting. Strategy adds a new component of scoring, mathematics, and spatial awareness to Scrabble. Without strategy, Scrabble is just a word game that might begin to become repetitive.
2. Scrabble strategy enables your scoring to be more consistent. If you make the highest scoring play or merely focus on the most obvious hotspots, you're bound to eventually draw poor tiles or run out of places to score. Employing strategic principles such as balancing your leave, making setups, or maintaining board control allows you to score turn after turn.
3. Strategy makes Scrabble more interactive. While you treat Scrabble as a game of solitaire, it's more interactive and social once you think influencing your opponent's options and how your opponent might respond to your plays. Strategy makes Scrabble a two-player game.
4. Strategy is often unintuitive. Many of the tactics involved in championship level Scrabble are hard to come up with on your own, and a lot of strategy has to be learned through experimentation or theory. High level concepts can turn a loss into a win when employed proficiently.

The bottom line: employing strategy helps you win more often. Whether it's stopping your opponent from scoring or playing a bonus or maximising your tiles in the endgame, thinking about these extra variables will help you win.



# How to Play Good Scrabble

“Good Scrabble” can be defined as the game played by those who know not only the basic game rules but who follow the principles which separate the Scrabble that a casual player might enjoy playing with family members from the advanced game you will understand by the end of this book. As with every game there are occasions in which those principles should be ignored, but in order to identify such moments you first need to learn the principles themselves. Here are the top tips which will immediately start you on your journey towards Scrabble stardom.

**For every potential play, the letters left behind on the rack are just as important as the score.**

Success at Scrabble is achieved by assessing a board position with a rack of seven tiles and then compiling a list of *candidate moves* before deciding to play the one which seems best. In the overwhelming majority of positions during the first half to two-thirds of every game of Scrabble you will ever play, the two most important factors to consider are:

- ♣ the score
- ♣ the quality of the rack leave

*Rack leave* refers to the tiles you are choosing not to play on this turn and which will therefore form the basis of your next rack. When expert players are asked by journalists or other non-Scrabble players for the single most important piece of advice a new player could be given, almost all of them will say that appreciation of the importance of rack leave rather than simply going by score alone is the thing which will most immediately improve anyone's ability to play Scrabble. The ability to evaluate “score vs. rack leave” and pick a move offering a good balance of both is the backbone of Scrabble move selection.

**Blank and S are the most valuable tiles in the game.**

The value of each tile in the Scrabble set can be measured in two ways. The most obvious value is the nominal point value printed on the physical tile itself (E is worth 1pt, Q is worth 10pts, etc.). However, each tile also has an intrinsic value to you as a player with the goal of building words and playing bonuses; this is what the tile is actually 'worth' when kept behind to form part of your next rack.

These two kinds of values usually have a negative correlation – JQXZ might have a high face value but they make building words more difficult, while the most useful tiles (AEINRST) are only 'worth' 1pt each, or even zero in the case of the most useful tile, the blank (which is usually printed as a question mark, thus “?”) but these tiles are the key to orienting one's rack towards those crucial bonus plays.

Whilst beginners might complain that the blank “doesn't score anything” and therefore should be dispensed with as quickly as possible, this is strategically disastrous as the blank's ability to act as the missing link to complete any promising-looking rack gives it enormous value. It should rarely be used in a non-bonus play, the only exception to this being when a move using the blank scores substantially higher than any other available move. The usual rule of thumb is that the blank has an actual value of 20-30pts depending on the stage of the game, which means that you should not use the blank unless doing so adds at least that number of points to your move score. For example, if you can score 24pts whilst keeping the tiles EIRT? or score 40pts whilst keeping only EIRT, you should take the lower score and retain the blank. You are simply not getting enough value out of the blank by using it to gain only 16pts.

The same principle applies to the S, which has an actual value of around 10pts. This is because it is the most commonly appearing consonant in bonus plays; one-eighth of the words in the English language begin with the letter S and it is the letter most commonly used to pluralise or inflect words, allowing you to hook your own play onto an existing word on the board more easily. When considering a move which uses the S on your rack, ask yourself whether you can score within 10pts of that move whilst retaining the S for your next turn. If you can, do.

**The high-scoring tiles JQXZ are usually more of a hindrance than a help, and holding on to them is the road to ruin.**

The tiles JQXZ appear once in the tile distribution and they are the ultimate double-edged swords in Scrabble. They can occasionally score well due to their high face value and can often be placed on a double or triple score for over 40pts with relative ease, but their appearance on the rack also usually ruins one's attempt to turn a promising rack leave into a bonus play.

There is common belief amongst beginners that it is “not worth” using JQXZ unless one can achieve a sizeable score with them. This leads to endless clunky non-bonus racks while the player waits for the mystical super-play to appear, which it usually doesn't. Meanwhile their opponent has dumped their difficult tiles for a lower score and then played a bonus to take a comfortable lead. Keeping any of JQXZ will immediately harm the value of your rack leave, thus as soon as one of these tiles appears on your rack you should look to play it for whatever is available and only choose not to do so if there is a substantially higher-scoring play available elsewhere which will compensate for the damage done to your rack leave. Even a simple QI for 11pts will often prove to be a superior move than a 25-30pt play elsewhere that leaves you stuck with the Q for the next turn.

Full knowledge of the 4-letter words with JQXZ (there aren't too many) and a smattering of useful 5s will help you to shed these heavyweights with ease and allow you to carry on towards your next bonus.

### **Size doesn't matter**

One of the most often repeated pieces of poor advice passed around amongst new players sounds like this:

*“If you've played 55 of the tiles at the end of the game and your opponent has only played 45, that means you'll have scored more points. Turn over as many tiles as possible on every turn and you'll have a better chance of getting the blanks and S's.”*

There is a correlation between winning and playing more tiles than your opponent, but this is because winners tend on average to play more bonuses than losers. These bonuses have appeared as a consequence of the player managing their rack well throughout the game. The crucial point which advocates of “tile turnover” fail to realise is that the *quality* of any rack leave is far more important than the simple number of tiles played or retained. Picking more tiles from the bag provides an increased chance of picking unhelpful tiles just as much as it increases the chance of picking helpful ones.

The key to successful rack management is avoidance of keeping duplicate letters and understanding which letter combinations have high degree of “synergy”; put simply, how well they work together. Quality over quantity.

## Avoid passing.

Beginners will sometimes spot the possibility of a spectacular move which is almost playable, if only the board position was slightly different. They decide that passing their turn, scoring zero and keeping the same tiles, is strategically sound. This is simply inaccurate.

In most situations, any sensible opponent will (at the very least) simply use your pass as an opportunity to exchange their own tiles, thereby leaving you facing the same starting position and an opponent with a stronger rack! Yes, your opponent might not know that exchanging is the correct counter play to a pass, but as a general principle you should avoid making poor plays to match your opponent's likely ignorance.

While there exist a few exceptions (especially in a Scrabble endgame, where far greater knowledge of the opponent's rack comes into play), passing in general is a huge mistake.



*When your family won't play with you any more, it's time to find a Scrabble club*

# The Game Behind the Game

Evan Berofsky

*“Is it worth it? There’s a joy to Scrabble that makes it both addictive and satisfying. Whatever the outcome on a given day, players invariably return. An elusive eight-letter word is found for the first time. A strategic concept that never made sense becomes crystal clear. Defensive tactics that were once a chore to recall, become automatic. Tiles that would have looked hopeless a year ago, offer scoring possibilities. The game comes together, piece by piece. This is why players do it.” - Paul McCarthy, Letterati*

So you’ve heard about the exciting world of tournament and club Scrabble. You may fancy yourself the master of the game against friends, family and online opponents, but how do you think you will fare against live, ‘professional’ competition? If your attitude entering this realm is one of immediate domination and glory, then you might want to rethink this position. However, if you are realistic in your approach in your first few visits, then you will probably want to continue reading.

Contrary to popular perception, Scrabble is more than just a simple word knowledge game with tiles and a board with fancy-coloured squares. A fair amount of skill, analysis, and patience are required, making Scrabble a lot closer to chess than most people realize.

## Walk on the Wild Side

The day has come. You have decided to make the leap into competition. Don’t be too nervous and, more importantly, don’t expect success right away. After all, you recently discovered words like QI and ZA. So there’s no sense rushing your inevitable climb to the top.

Studying proves to be a long and intense process, but ultimately one that becomes gratifying when words you recently learnt blend into your decision-making process. The urge to increase study workload may be tempting, but don’t try to cram too much too quickly. You will improve at this game; it just takes a little time. Be patient, young grasshopper.

At this early stage, you will most likely hesitate to play words of which you are unsure. While this may occur frequently, you shouldn’t waste too much time on any turn. On the other hand, don’t be too hasty in any decision to allow for the most recent change in board appearance. You have 25 minutes (or less, depending on where you live) and you don’t receive bonus points for any remaining time, so use it wisely.

Like poker and other live head-to-head hobbies, reading your opponent can be an integral part of the game. Their behaviour and mannerisms at different points could signal what kind of tiles they possess. Or it could simply tell you how tired or hungry they are. Visual and audio cues will become better to identify once you’ve played a certain opponent enough times.

## The Long and Winding Road

A few tournaments have come and gone and you finally feel comfortable. You may have also mastered a number of varied word lists. Surely, you’ve gone through all the 2s, 3s, the high-point 4s and 5s, and the first few hundred 7s and 8s by probability/playability. But, alas, Scrabble is so much more than just strings of letters that accumulate points.

After this initial study period, you may be tempted to try out your new material at the first opportunity. While this may be handy at times, implementing this technique regularly at an intermediate or expert level is hardly a winning strategy. Spotting words on your rack is one thing, but can you regularly find them on a live board?

This doesn't mean locating the hotspots. Heck, anyone can do that. And many newcomers often worry too much about leaving them open when better scoring opportunities exist. But that reaction is normal, as the brain initially interprets the coloured squares as a miniaturized polygon form of Shangri-La. After a while, you will eventually learn they act more as distractions than as a way to help your overall game.

Board vision is one of the key characteristics that separate the great Scrabble players from the average ones. Looking over the 15-by-15 grid as a single unit and then determining the best move every turn may seem like a daunting task, but the process gets easier as you familiarize yourself with the board. There may be a play along the top row, but if you aren't paying attention, then you'll probably overlook the 4-tile overlap or the disconnected 6-letter word that does a better job of cleaning up your rack.

Studying and analysis are both fine tools to own in your Scrabble repertoire, but so much is required from your mental approach. After all, a tournament – or even a casual encounter – brings out the competitive side in all of us. What's ultimately important in all this is the ability to stay focused while still being able to enjoy the game. (Yes, you heard me right. I said 'enjoy'. A few established players may disagree.)

The pressure may overwhelm you during a game if you let your mind dwell on everything at once. The anxiety about each analysis. The formulation of alternate ideas. The intense shuffling of letters. The concern over the clock. The thoughts about what your opponent may or may not be holding. And those annoying external noises. There's just so many activities going on every turn.

The important task during these moments is to separate the essential activities from the extraneous ones. Try to handle what you can control. There is no sense concerning yourself with that creaky table on the other side of the room because it won't help you make the next play. Focus. Take a deep breath. Calm your nerves. Think of something positive and smile. Then lay down your word. Repeat. It's really that simple.

## **Big Shot**

With a few strong tournament performances under your belt, you're ready to climb the ranks. You could be full of pride and hope, excitedly seeking out the next challenge. Or you may worry about your progress, fearing you will be stuck at a certain level. Either way, your next move is to test yourself against experts.

When approaching a battle versus a higher-rated opponent, you must think like any other game. No matter the opponent and his/her credentials, try not to be intimidated. You go in distracted like that and it's almost as if you're playing from behind. Awe and wonderment are for space shuttle launches, not for Scrabble.

Never assume experts will always play acceptable words. If a bluff works the first try, then another example will probably be introduced later on. Nothing unethical about that. Let's not forget they are there with the same goal as you: to win. Advanced word knowledge and experience will help you sniff out the phonies, but so will frequent encounters with the same opponent.

After dispatching a number of big names, you'll probably feel like you're on top of the world. Brag to your friends and fill up the message boards with tales of your accomplishments. But then please come back down to Earth. Prolonged bouts of cockiness will often lead to laziness. The only way you'll continue to improve is to admit you can do better. So go out there and do it.

# The First Move

Brett Smitheram

Few moves in the game of Scrabble have so frequently found themselves both under- and over-analysed more than the opening play of the game. Statistics show that in games between two players of equal ability, the player who has the first move will win 54% of the time, but how do you decide the right play on a completely free board, and what considerations are worth mulling over?

Some major areas of discussion within this topic (rightly and wrongly) include: Vowel placement, Orientation, Risk of providing floaters, Potential triple-word extensions, and the “Nearly” Rack.

## Vowel Placement

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
7			2L				2L		2L				2L		
8	3W			2L				★				2L			3W
9			2L				2L		2L				2L		

The greatest myth surrounding the opening move is the belief that it is worth sacrificing more than 2 points in order to avoid placing vowels next to the double-letter squares in columns (g) and (i). A number of books and magazine articles were published around 15-20 years ago which advocated playing a lower-scoring move in order to avoid doing this, but this was in an age where human “gut feeling” was utilised rather than hard data, and human nature recalls those odd occasions where you get stung much more vividly than the majority of occasions when you do not. Computer simulations have now shown that in reality a vowel placed next to a double letter score is only a tiny threat.

If you have a choice between two or three moves of *equal* score then choosing one which avoids this may be preferable, but factors such as rack leave (investing in the future) are far more important. If in doubt, grab the points on offer rather than attempting to be defensive from the very start.

## Orientation

As we read from left to right in English, the vast majority of opening plays are positioned horizontally. Whether there is any genuine strategic value to playing vertically is highly debatable. The plays available to your opponent are identical in either case. Some players believe that an “unnatural” vertical positioning can disconcert/disorient the opponent, or make it easier to see an 8-letter play horizontally, but unsurprisingly there is no difference whatsoever if you look at the raw (computer) data.

## Risk of providing floaters

While only one rack is able to provide a given 7-letter play, a total of 8 different racks can combine with an additional letter on the board to create the same 8-letter play. Some consideration therefore needs to be given to your opponent’s relative strength (if you are aware of it) and the risk of providing multiple useful floating tiles to enable them to play an 8.

Take for example an opening rack of **AACENTV**. No 7-letter play, but good scoring potential exists in VACANT or VACATE/CAVEAT. However, consider the merits of VAC placed centrally: very few parallel plays are available (only if your opponent has an H to make CH) and only if they have an S can they hook VAC-S. Without these, your opponent is restricted to a simple, likely low-scoring

play through the V, A or C. Additionally, you are keeping a strong AENT which may well combine to make an 8 with the floaters your opponent will likely give you.

Of course, if they \*do\* have a playable bonus then we have sacrificed 14 points to little benefit, but these are the probabilities which need to be considered.

As a rule of thumb, it is probably better to choose the more restrictive play if you believe you are at a significant disadvantage in word knowledge, but if you do get stung, it will hurt more!

Finally, it is worth noting that approximately 1 in 8 opening racks makes a seven-letter word. If you find you have picked a high-probability rack with a blank and have a variety of bonuses to choose from, consider making the blank tile the same as one of the other letters in the word; there's no point in giving your opponent an extra choice of floating letter to use in reply.

### Potential Extensions

This is the concern that an opening play might give the opponent a higher-scoring response by extending the word to the TWS, a risk usually overestimated by weaker players. The issue is best considered with specific illustrations.

Example Rack #1: **CEEKLRR**

The word which leaps out at us is CLERK. With this rack there should be no hesitation in putting it down at (h8), taking the 32pts and moving on. "But hang on!", you cry, "What about the risk of the opponent turning it into CLERKING?"

CLERKING will score 45pts. This is roughly 15-20pts more than you might expect them to score on average. However, in order to avoid this risk, you will need to either choose a different position for CLERK (presumably d8), sacrificing a whopping 8pts on the very first move, or play CREEK (h8) which leaves you with an inferior LR vs ER if we play CLERK. Of course SUB-CLERK and CREEK-IER are both valid as well...

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
7			2L				2L		2L				2L		
8	3W			2L				C	L	E	R	K			3W
9			2L				2L		2L				2L		

### The correct position

It is vital to realise that the opponent needs to be sitting there with ING on their very first rack in order for this threat to be relevant. After their first reply you will both have an equal chance of getting the necessary letters. As with the decision to place vowels next to double-letter squares mentioned above, the apparent risks in this situation are usually overestimated by less experienced players. Mathematically, the probability of an opponent having the letters ING on their opening rack is actually only 1 in 40. Once again, if in any doubt, just grab the points.

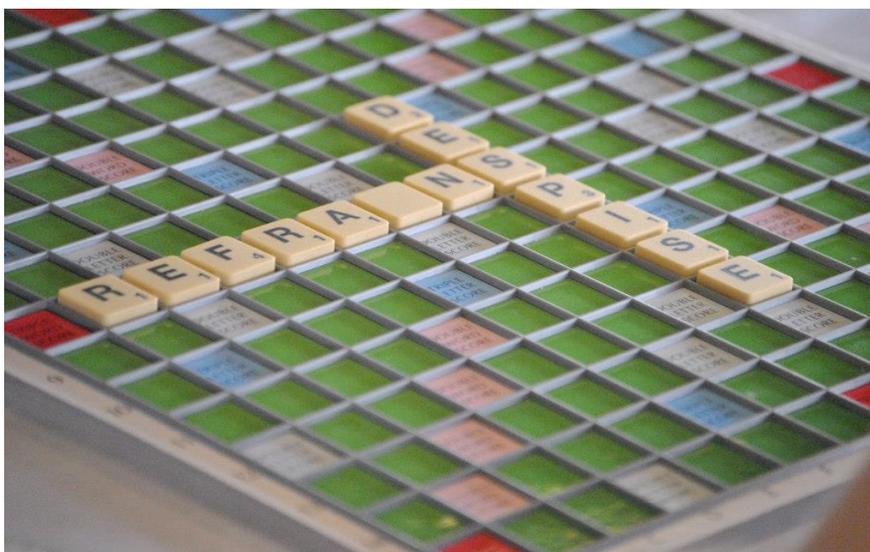
Less clear-cut examples exist among short plays. For example, if you have decided you have to play off the tiles AEFKR from your rack, what would you play?

FREAK (h8) maximises the score with the added bonus of keeping a vowel away from the double

letter squares. However, extensions of –IER, -ISH, -ING, -ILY, -ERY, -FUL and –OUT are all potentials. FREAK ending on (h8) sacrifices points, leaves a vowel next to the double letter, and has the potential front extension of ECO-. Finally FAKER ending on (h8) sacrifices points and leaves a vowel next to the double letter.

In fact, computer simulation shows that FREAK beginning at (h8) is the best play, followed by FAKER, winning approximately 1% more games, and 2% more than the alternative positioning of FREAK. It's not a clear cut result if the multiple minor pros and cons are considered, but it does continue to uphold the general rule of thumb.

**Summary:** On the whole, if you have found a five- or six-letter play which reaches a double-letter square, play it. It is not worth sacrificing score in order to position the tiles more defensively.



Example Rack #2: **EEEFRRZ**

A classic poser. No prizes for spotting FREEZER, but do you play it to double the Z for 108 points and risk your opponent having a huge reply with a simple –S play on the triple word score, or do you sacrifice a massive 12 points by doubling the F instead for 96?

Again, the raw numbers *appear* to be on your side with the more aggressive play. Your opponent has 7 chances out of 93 unseen tiles to have an S or blank. If they don't, then you subsequently have 7 shots out of 86 and they are presented with the dilemma of whether to try to block a potentially game winning 2-move double whammy and in so doing sacrificing their own score, or maximise their own score and ignore the danger.

Despite this, it would take a brave player indeed, when faced with a 96 point alternative, to take any form of perceived risk at all... although of course there is always the chance your opponent promptly plonks down BUMFREEZER for 78!

In fact, simulation on this occasion favours the more conservative play, showing that it wins just over 3% more games. This is likely to be due to the very high alternative score on offer for the price of 12 points and the extreme nature of the potential risk; but when it comes to defensive choices on the first move, this is a rare example!

**Summary:** With two very high scoring alternatives (e.g. those likely to be worth around three average moves or more) there is slightly more room for defensive thinking to avoid moderate risks.

## The “nearly” rack

By this is meant racks which require something additional to realise their potential, be it a floater for an 8 (e.g. AAEINRT), or a place to play a high-scoring tile (e.g. JKRRTXZ)

The first thing to make clear is that passing is *never* the right thing to do. If your opponent has any sense at all they will simply change in order to create a bonus on their own rack – and even if they do play, it is not guaranteed that they will give you the desired floater and you find yourself in the same position, just further behind.

In the first example, the best move is simply to exchange one A. This is because AEINRT is hugely likely to yield a 7 or 8 with another random tile, and any score (e.g. 4 points for AI, or 14 for RETAIN etc.) is significantly below what could be achieved with the highly-likely bonus on move 2, even if move 1 scores nothing.

In the second example, it would only take one vowel to give potential high scores from the likes of JERK, RITZ or ZAX/ZEX etc. But bearing in mind the earlier comment on passing, it may surprise you to learn that players have completed games with a total \*negative\* score by passing in the hope that their opponent (who subsequently also passes) gives them a high scoring opening, which never appears!

Best play here is again to change. It may feel counter-intuitive to put ‘goodies’ back in the bag for your opponent, but in reality they will only hold you back. Good options include retention of one or both of the Z/X as they are the most flexible of the high scorers, along with one or both of T/R. It is not, however, advisable to keep more than 2 or 3 tiles in total, in order to minimise the risk of another rack full of consonants.

**Summary:** If it’s a “nearly” rack, changing is usually the best choice.



*Australian artist Emma Anna's imag\_ne installation*

# Understanding Rack Leaves

Stewart Holden

It is no exaggeration to describe successful rack leave evaluation as the Holy Grail of competitive Scrabble. If asked to identify the main difference between casual 'at home' Scrabble players and those who play competitively, most experts will say this is the defining factor. Beginners will simply try to form any word from their seven tiles and take the maximum score they can see, ignoring the letters they are forcing themselves to have on the following turn. Effective rack management in the first half of a game of Scrabble is geared strongly towards manipulating the rack towards high-probability bonus plays using mainly the 1pt and 2pt tiles which constitute 75 of the 100 tiles in the bag.

Take the example of a rack of **ABEFORT** somewhere near the start of a game. An expert player's thought process could be as follows:

- 1) What are the most difficult and non-bonus-friendly tiles on the rack? Answer: B and F.
- 2) Do I want to simply dump them both and leave AEORT? Answer: No, this rack leave would be too vowel-heavy. I need to link them somehow with a vowel.
- 3) The most obvious options are FAB or FOB. Which one is best? Answer: AERT is a better rack leave than EORT, because A is a better tile to keep than O.

Conclusion: play FOB keeping AERT.

This is perhaps an oversimplified example but it demonstrates the general idea of playing away the mid-value tiles to manipulate the rack towards high-probability bonus material (there being more than 1000 seven-letter words containing AERT plus three other tiles). If you can apply this type of process to the majority of racks in the first half of every game, then you are already playing better Scrabble than 90% of domestic players.

It goes without saying that the essential counterpart to the above strategy is to know the high-probability bonuses one is most likely to draw into. For this there is no substitute for having done the hard graft of studying, but the chapters on word learning and Zyzzyva will make this much easier. Learn the most useful and commonly played 4s and 5s for getting rid of the non-bonus tiles alongside the high-probability 7s and 8s that will appear on your rack as a result and you will find your average number of bonus plays per game starting to increase.

So what are the other important factors in assessing rack leaves?

## Play away duplicate letters

You are more likely to create bonus words if you rid your rack of duplicates. Keeping four I's and two V's might allow you to play DIVIDIVI, but precious little else. Combinations with one of each letter like AEIRST and AEINRT will yield several hundred possible sevens and eights. If forced to choose between keeping duplicate letters - EE and AA would generally be preferable to II, OO and UU. With consonants TT, RR and PP are preferable to CC, HH and VV.

## Keep a balance of vowels and consonants, ideally three vowels and four consonants

The full Scrabble set contains 58 consonants and 42 vowels. Depending on the board (and tile bag) situation a slightly consonant-heavy rack is more conducive to bonus formation. Let your tile tracking grid (see later chapter) guide you as to whether the bag is consonant-heavy or vowel-

heavy and retain the appropriate tiles; if you know only one E is to come, be wary of wasting it.

### Don't hold on to the wrong tiles

One of the most common mistakes is to cling on to 'power tiles' such as JQXZ in the hope of scoring more points with them later. Every time you do this you substantially reduce the probability of picking a bonus play. Note that a common mistake, even amongst experienced players, is to hold on to a mixture of both bonus-friendly tiles and one of JQXZ. A rack leave of ERTZ is unlikely to yield a bonus play and the chances of picking three tiles which combine with the Z for a decent score are very slim, meaning that the next turn after keeping ERTZ will involve some destruction of the bonus-friendly ERT.

Note that the amateur practice of holding on to a U if the Q has not yet been played is unnecessary due the availability of QI, QAT and friends. The U is by far the least helpful of the vowels and is not a tile anyone should strive to make part of their rack leave. When you pick the Q it is usually advisable (and not too difficult) to get rid of it almost immediately; the table of U-less Q words may help with this.

The S is accorded a special value and should not be frittered away if you can score 8-10pts less elsewhere whilst keeping it, but this principle should be applied to only the first S on the rack. A duplicate S should be treated the same as any other duplicate tile; it can still have uses when retained for a future -S hook but should not be afforded the same protection as the first S in a rack leave. Example:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W				3L			B	3L				2W	
3			2W		G		2L		L					2W	
4	2L			2W	L			2L	O			2W			2L
5					O				N		2W				
6		3L			R	3L			D	3L					3L
7			2L		I		2L		E					2L	
8	3W			2L	F	L	A	W	S			2L			3W
9			2L	B	Y		2L		2L				2L		
10		3L		E		3L				3L					3L
11				S	2W						2W				
12	2L			A				2L				2W			2L
13			2W	I			2L		2L					2W	
14		2W		N		3L				3L					2W
15	3W			T				3W				2L			3W

Rack: HKMOSST

Two S tiles have already been played, meaning that the player holds both of the remaining S's. Nonetheless in a computer simulation of this position MONTHS (14b, keeping KS) places

considerably better than MONTH (14b, keeping KSS) due to the extra 2pts in score, the fact that it's slightly harder for your opponent to use row 15, and the rack leave being considered superior. Also faring well is MHOS (c12) which uses the S for only 4pts extra compared to MHO in the same position, but KST is a better rack leave than KSST.

However, the optimal play given by Quackle computer software is MOTH (g9) making use of the BLONDES-T hook. In this instance the duplicate S is retained because the play creates an -S hook that the opponent is unlikely to block unless they have the single remaining Y for MOTH-Y, whereas playing MOTHS in the same place would not have this benefit.

### **Go fishing, but don't neglect your score**

Only play away a single letter (fishing) if your rack is in such good shape that it virtually assures you of a bonus word next turn - such as AEIRST plus Y. The key is judging how many points to sacrifice in order to make the 'fish' worthwhile; you may only be able to score 13pts for dumping the Y alone but could play YA for 28pts with the still promising remnant EIRST. Even the humble three-letter leave ERS attracts a bonus roughly 33% of the time. However with every tile you play rather than keep, the odds of drawing into a bonus rack decrease. This is where analysis of positions using Quackle is particularly useful as it will simulate each position many thousands of times to put the available options in order of likely success; looking at the results will help you to make more successful decisions in your own games.

### **A change for the better**

Exchanging is an essential strategy in which one chooses to score zero but with a free choice of rack leave from the seven tiles on your rack. This is covered in detail by Kevin McMahon in a later chapter.



*QU(A)CK or QU(I)CK might score well here but the rack leave would be horrific. A floating O for QU(O)NK to leave CNN would be preferable.*

# Exchanging

Kevin McMahon

*"In a chronically leaking boat, energy devoted to changing vessels is more productive than energy devoted to patching leaks." - Warren Buffett*

Do you remember the very first piece of advice given in this book? Let me repeat it. When deciding on a play, there are two equally important factors - score and rack leave - that significantly outweigh any other considerations. In this respect a change is no different to any other move; it is just a move where the score happens to be zero. Try to see changing in this objective way, and not as something negative. Changing is an assertive attempt to solve a problem and maximise your chances of winning, not a forlorn act of desperation when there is literally nothing else to do. Some players are especially reluctant to record a score of zero when already lagging behind in a game, and adopting a positive attitude toward changing can help to cure this. When you are facing a 60 or 70 point deficit and a horrible rack to go with it, the best thing to do is to peacefully accept the fact that your chances of winning will probably not be particularly high no matter what you do. You should then avoid making them even lower by failing to change and attempting to wade through a mess of ugly letters.

To give you an idea of how often top players change, I looked at 28 games in the 2012 King's Cup, a prestigious tournament that took place in Thailand and included some of the world's finest experts. Six changes were made in these 28 games, meaning the average participant changed roughly once every nine games. However the optimal rate for a non-expert may be higher, as high-rated players will more often be able to use their word knowledge to "solve" a rack of awkward tiles where otherwise a change would be necessary. For example, in one game Helen Gipson picked out four O's at once from the bag, but instead of throwing them straight back in was able to make use of the word MOOLOO for nine points (not that many, but still nine more than zero).



There are a couple of reasons why changing may be best even when a scoring play is available. Usually it will be because the score or the leave (or both) from the play is particularly poor. Sometimes, such as the AAEINRT example given in the First Move chapter, it can be because changing gives you a leave that is so good it justifies passing up other plays. Let's look at some examples to help develop your intuition about what tiles to change and when.

To judge the exact worth of each change in the following positions, I used Quackle, an excellent program which is discussed in depth elsewhere in this book. For those who care, I did a 4-ply, 10,000 iteration simulation in each case.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W				3L				3L				2W	
3			2W				2L		2L				2W		
4	2L			2W				2L				2W			2L
5					2W						2W				
6		3L				3L				3L					3L
7			2L				2L		2L				2L		
8	3W			V	I	R	E	O				2L			3W
9			2L				2L		2L				2L		
10		3L				3L				3L					3L
11					2W						2W				
12	2L			2W				2L				2W			2L
13			2W				2L		2L				2W		
14		2W				3L				3L				2W	
15	3W			2L				3W				2L			3W

**Our rack: AEIIOR**

The best of the available scoring moves are probably AI(R)IER (f6) for 10pts retaining a not-great IO and (V)IREO for 16pts (d8) keeping an unpleasant All. Neither of these are very appealing because both score and rack leave are poor, so an exchange is in order. Here are some options, roughly in order from worst to best.

**Exch 7** - Having decided to change, you may decide to go all out and throw everything back, perhaps to try to increase your odds of drawing a blank or S. However, it has already been explained in this book why turnover for the sake of turnover is not a sound strategy, and this reasoning holds up for exchanges. The definition of "good tiles" is wider than just blanks and esses. You want to keep some control over your rack, and not leave your next turn totally up to chance. This is throwing the baby out with the bathwater.

**Exch 6/ Keep E** or **Exch 6/ Keep R** - A little better than getting rid of everything - you're eliminating the vowel problem while still ensuring you will have at least one decent tile on your next rack. But this still leaves your next rack more random than it needs to be.

**Exch 3/Keep AEIR** - OK, so you want to hold on to as many good tiles as possible for your next rack, and deciding to keep four of the letters that appear in RETAINS seems sensible. But keeping one consonant and three vowels still leaves things too unbalanced. If there were a lot of floating consonants or if we were at a stage of the game where the remaining letter distribution was skewed in favour of vowels, this might be alright. But of the two floating consonants available, one is an ugly V and the other is a duplicate of a tile already on our rack. And there is too much probability of picking more vowels and still being bogged down next turn.

**Exch 4/Keep AER** or **Exch 4/Keep EIR** - Definitely going in the right direction now, and these are two decent choices. But neither of these is quite the best option. The leaves are still a tad vowel-y for the position we are in.

**Exch 5/ Keep ER** - This is the change Goldilocks would make - not too much, not too little, but just right.

Note that if this were an opening rack, then Quackle rates Keep AER as the best choice, marginally ahead of Keep EIR and Keep ER. This shows that the best leave from a particular rack is not the same every time, but also depends on factors such as board position/remaining pool.

### A typical consonant-heavy rack



**Our rack: FIRTVVW**

This is a similar situation to the last example, with a surplus of consonants rather than vowels. Again, there are no scoring plays available that either score decently or keep a good rack leave, so changing is the way to go. I've listed some possibilities below. Try to rank them in a similar way to last time.

- Exch 3 - Keep FIRT
- Exch 4 - Keep IRT
- Exch 5 - Keep RT
- Exch 6 - Keep R
- Exch 7 - Keep nothing

Here is the correct order, again from worst to best.

**Exch 7** - Same reasoning as previous example. Of course exchanging seven is correct occasionally, but racks that are entirely unredeemable are fairly rare - there's nearly always something to be salvaged.

**Exch 3/Keep FIRT** - Holding onto the F may be defensible in the later part of the game where the board is more closed and mid-value tiles become more important for taking advantage of TLSs and other premium squares. But in the early part of the game we should be maximising our bonus chances, and the F is not a good bonus tile. It's not worth keeping here.

**Exch 6/ Keep R** - R is a good tile, but why only keep one good tile when you can keep...

**Exch 5/ Keep RT** - two good tiles? Or even...

**Exch 4/ Keep IRT** - three? While you wouldn't usually keep an I on its own, it fits in well here and improves the vowel-consonant balance. This is the best move available.

It's worth saying that the difference between exchanging FVVW and exchanging all seven is not actually all that huge. While the latter is undoubtedly a mistake, it's a relatively small one. Choosing not to exchange at all and to play something like WRIT, keeping a horrible FVV, would be much more damaging to your long-term chances of winning the game.

## A borderline case

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O		
1	3W			2L				3W				2L			3W		
2		2W				3L				3L				2W			
3			2W				2L		2L					2W			
4	2L			2W				2L					2W		2L		
5					2W							2W					
6		3L				3L				W					3L		
7			2L				2L	W	2L	U				2L			
8	Y	O	K	E	D			Q	A	T	S			J	O	H	N
9			2L		A	V	I	S	O					E	X	O	
10	P	3L				3L		T			3L			S	O	D	A
11	A				F	I	N	E	R	I	E	S					
12	V	E	N	G	E			R					E				2L
13	E		2W				2L	F	2L					2W			
14	E	2W				3L		L	U	Z	3L				2W		
15	D			2L				L					2L				3W

Our rack: EIINUUY

In the two examples so far there was no room for debate - exchanging was best. But here there are two plausible scoring plays; YIN (13c) for 31 and YU for 23 in the same place. These are decent scores not to be sneezed at, but they come at the cost of nasty vowel-heavy leaves.

As it happens Quackle very narrowly favours YIN over both YU and Exchange IIUUY, possibly because the value of keeping bonus-friendly tiles is decreased on this bonus-unfriendly board. But I can't give you an exact recipe to follow for situations like this. Most players have a natural tendency to underestimate how good or how bad a particular leave is, so I tend to err on the side of exchanging to try to correct this bias. But the most important thing may be to just avoid dawdling, pick something and save time for more crucial decisions later.

## A rack of power tiles

Our rack: JQUVVXZ

This would be a bizarre rack to draw in an actual game, but useful for talking about the relative values of "power" tiles. Again I will list a selection of possible exchanges, from foolish to wise.

**Exch 6/ Keep Q** - This is one of the worst moves it is possible to make in the game of Scrabble. Don't do it. Seriously. Although the face value of 10 points for the Q is equal highest of any tile, its "true" value is easily the lowest. For every meaty score you get in the 50-60 range (e.g. QI/QI with the Q tripled twice) there will be many more times when you have to settle for a mediocre 20-something QAT, a regular 11-point QI, or just have no place to put it at all and be forced to either effectively play with six tiles or change again.

**Exch 6/ Keep J** - The J is significantly less clunky than the Q, but still undoubtedly more enemy than friend. Again, it will frustrate you more often than it will grant you a nice JO/JO.

**Exch 6/ Keep X** - The X features in the most two-letter-words of any of the power tiles, but its overall flexibility is still lower than the Z. It's more debatable than the J or Q, but I would still throw it back most of the time.

**Exch 5/ Keep QU** - Although holding on to a lone Q is a bit suicidal, when you add a U things aren't so bad. Your chances of scoring decently are vastly increased. However, the danger of being forced to dump the Q for hardly anything is still present, albeit reduced.

**Exch 7** - With this rack full of alleged power tiles, it is interesting that only two of the possible changes are better than keeping nothing at all.

**Exch 6/ Keep Z** - The Z is easily the best of the so-called goodies. It's the least likely to have to be dumped, and its versatility makes it the most likely to get a good score with. It appears not only in more short words, but also more bonuses than any other power tile (2128 seven and eight letter words, compared to 1572 for X, which is next best)

So, the Z is the only power tile that is unarguably worthy of the name, and is often worth keeping when you exchange tiles. The X is pretty much neutral. As for the J and Q, it is rarely advisable to hold onto them in an exchange. While it's usually fine to keep the Z, and maybe X, and trust to luck that you'll get a good score next turn, you should never hold on to the J or the Q unless you know exactly where you are going to put them.

## Bonus or power?

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W				3L				3L					2W
3			2W				2L		2L					2W	
4	2L			2W				2L					2W		2L
5					A							2W			
6		3L			V	3L				3L					3L
7			2L		I		2L		2L					2L	
8	3W			G	E	M	E	L				2L			3W
9			2L		T		2L		2L					2L	
10		3L			T	3L				3L					3L
11				P	E							2W			
12	2L			U	S			2L					2W		2L
13			2W	H			2L		2L					2W	
14		2W				3L				3L					2W
15	3W			2L				3W				2L			3W

**Our rack: EQRSTVZ**

The best play that scores anything is either SEZ c12 (37) or VERST i5 (19), but the excellent leaves possible make changing the better choice. However, do you aim solely to give yourself the best chance of a bonus? Or do you keep the Z to make sure you score well even without a 50-point bonus? In a way, that depends. Quackle rates Exchange QVZ as just edging out Exchange QV. On the other hand, Quackle knows all the words, including all the high-probability bonuses containing ERST.

But if you aren't solid on the high-probability bonuses, you may be better off keeping the Z with ERSZ. After all, there is no advantage in keeping bonus-friendly tiles if you then miss the resulting bonus. However, if you have ambitions to be an elite Scrabble player, then you really should be solid on the high-probability bonuses. Short, high-scoring words are all well and good, but it's bonuses that win games of Scrabble. (Note that Z is of course a very good tile that often is worth holding on to. It's only because ERST is so powerful that it's worth letting go of the Z.)

## A valuable hook

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W		H		3L				3L				2W	
3			F	A	D		2L		2L				2W		
4	2L		O	P	E			2L			P	2W			2L
5			B		L						O				O
6		3L		R	E	Z				3L	R			3L	R
7			2L	A	T		U	R	A	E	I		2L		C
8	3W	J		K	E	E	N	E	D		S	2L			E
9		A	G	I	S	T	2L		2L		T		2L		I
10		B				3L				M	I	M		3L	N
11					2W		A	U	T	O	C	A	D	E	S
12	2L		W	I	L	I	N	G				Y			2L
13			2W				2L		2L				2W		
14		2W				3L				3L				2W	
15	3W			2L				3W				2L			3W

Our rack: LLNNRTW

This is another example of how the board position and remaining tile distribution can affect what move you should play. Normally the W is an awful letter and keeping one after a change would be a very bad idea, but here it is an excellent one. The potential of a substantial score for hooking W-HAP (d1) is too good to ignore. Especially when you consider that the spot is difficult to block, and the other W and both Cs (the only other letter that hooks HAP) are already gone. Any change that keeps the W easily outstrips other choices, with Exchange LLNN (keeping RTW) being best of all.

In summary, changes are nothing to be scared of and can be enormously beneficial if used correctly. Their pros and cons must be weighed in the same way as any other move. It takes practice to consistently pull off skilful changes at the right time, but hopefully reading this chapter will get you there a little quicker. Good luck!

# Phoneys

Ed Martin

*"If you lose a turn with a phoney then you don't deserve to win the game. Simple."* - Mark Nyman

Don't play phoneys! Many players underestimate just how costly a phoney is, especially newer players. Even one phoney has a strong chance of costing you the game. On the surface a phoney appears to cost you the points you would otherwise have scored that turn. It's actually a lot worse than that.

Firstly, you have put yourself into a poor frame of mind and will immediately lose concentration. "Why did I play such a stupid move? I should have known that was never a word! If only I had some sense!" Feelings of anger and annoyance are not conducive to cool, rational analysis – and if you play a phoney and have to face the same rack for a second time then your next move is likely to be poor as well. If you can't regain your composure quickly, it may affect the whole of the rest of the game. Be positive – after playing a phoney there is nothing you can do about it. Concentrate on playing the best move on each of the remaining turns.

Secondly, you have revealed all or part of your rack to your opponent. The degree to which this matters depends on how many letters you showed and the stage of the game. In the most extreme example, if you play a phoney bonus with fewer than seven letters in the bag, your opponent will know exactly what is in the bag, and will be in a position to outwit you in the endgame. Fortunately this is rare. More normally the effect will be lesser – but still important. Most obviously, your opponent will be able to block your best plays on the next turn. Alternatively, they may be able to play an unusually aggressive move, safe in the knowledge that you will be unable to take advantage of the opening. Most likely, you will return to cursing yourself about your folly in playing the phoney in the first place, compounding the problem.

While the effect of a phoney on the result depends on circumstances, it is a mistake to think that it is somehow less of a problem to play a phoney immediately after your opponent has played a phoney, or perhaps exchanged, on the grounds that neither players' score has increased. That argument won't amount to much when you have lost a game by 40 points and could have done something about it! Similarly some players are unperturbed by playing a phoney on the first move. The same thing applies – it might be the difference between winning or losing. The fact that the phoney doesn't put you into a losing position in its own right is neither here nor there.

Weaker players will often say that they were 'unlucky' because their word was disallowed, but this misses the point that playing a phoney is usually a choice. It is very rare for a player to put down a word that they are 100% sure is valid, only to have it disallowed; there is usually a scintilla of doubt over a nonword before it is played. Whether it is caused by a "rush of blood to the head" or just excessive optimism that a high-scoring or rack-balancing move will be allowed, the fact is that if you choose to play within your own safe word knowledge (i.e. only picking candidate moves from the list you have in your brain of definitely acceptable words), you can choose not to play phoneys at all. The thought process *"Hey, you never know if you don't try"* usually precedes a phoney. Instead of risking the loss of a turn, make a note of your potential word at the bottom of your scoresheet with the intention of looking it up after the game. Then take the safe option instead. Scrabble is about "controlling the controllables" and the number of turns you lose by playing phoneys falls into that category.

Of course, the only sure fire way to avoid playing phoneys is to study. You just need to know the words – and if you have to resort to guesswork during the game, you are at a massive disadvantage. See elsewhere in this book for the most effective methods of studying.

# Tile Tracking

Brett Smitheram

When taking the step from 'domestic' play to club level or higher, one of the principal differences is the practice of tile tracking, where one is allowed to keep a record of which tiles are on the board and hence know which ones remain 'unseen'.

New players often express surprise that this practice is allowed, since in card games one cannot sift through the discard pile and so work out what the opponent is likely to be holding – it feels almost dishonest, as if you were looking over your opponent's shoulder! The vital difference is that Scrabble is what game theorists would call a *total knowledge* game. Since all the played tiles are on the board visible to both players at all times, it is impossible to prevent a player from seeing whether the Q has been played, how many Es are left, whether the blanks have already gone, etc.

Furthermore, useful information about whether the bag contains an excess of any particular letter or a noticeable imbalance of vowels/consonants allows a player to make better decisions during the game (e.g. would playing VIAE or VILD be most likely to yield a balanced pickup mid-game?) When approaching the endgame this information becomes vital, as the ability to estimate the probability of the opponent holding certain crucial letters makes an enormous difference to one's success rate and makes the whole endgame scenario both more complex and more exciting. In 4 out of 5 games your tile tracking won't make much difference to the endgame, but in the other it will be the difference between winning and losing.

## Why is tile tracking so useful?

Tile tracking all the way through a game allows you to:

- Reduce your chances of picking duplicate tiles by seeing which letters are in abundance in the bag
- ✧ See at a glance how many power tiles (JQXZS?) remain and hence know whether score or tile turnover is more important at that moment and whether the rest of the game will be more dependent upon bonus plays or high-scoring non-bonus plays.
- ✧ Know whether a word with a hook is safe to play because all relevant letters are already out (e.g. can I play RIZ dangling above the bottom row knowing that every A for RIZA has already been played?)
- ✧ See how many tiles are left in the bag without needing to check and determine whether to attempt to leave one tile in the bag (more on this tactic in the Endgame chapter)
- ✧ Block the opponent's most likely high-scoring moves
- ✧ Block the opponent's outplay
- ✧ Increase your chances of making the last play and gaining 'countback' from your opponent's unplayed tiles

Some non-expert players do not keep track of tiles throughout the game but only begin to tile track once the bag is nearly empty. There are numerous disadvantages to this, most notably that the first two benefits listed above are completely lost and that tile tracking 80% of a game at once takes a considerable amount of time (which may not always be available). Tight games in which tile tracking becomes most important are also likely to be the ones which have required the most thinking time; with the clock running low the player decides they now don't have time to track the whole game and inevitably falters in the endgame. The solution is simply to get into a routine of tracking every move as it is played.

The golden rule of learning to tile track is that practice makes perfect. When you come to apply the techniques in this chapter, your first attempt at tile tracking will almost certainly go horribly wrong.





## How Do I Use It?

The act of tile tracking does not intrinsically improve your play, just as buying a more powerful car does not automatically make you a better driver. Here are some guidelines for what to do with the information you are gathering:

i) If you have a choice between plays of similar score but using different letters, check how many of each tiles remain and reduce the chance of having duplicate tiles on your rack. For example, if there is no real difference between playing GRIN or GRIT but the tracking grid shows NNTTTT remaining, you may very well opt to play GRIT because you are much more likely to pick T than N.

ii) Are the tiles left bonus-friendly? This will determine whether you need to be closing down the board to protect your lead or whether blocking powerful spots for JQXZ plays is more important, with similar (but opposite) considerations if you are trying to catch up.

iii) Do you hold the last one of any particular letter, and can you use this to your advantage by setting up a hook that only you can use?

iv) As the endgame approaches, what is your opponent most likely to have on their rack and where are they likely to use it? For example, there are 8 tiles in the bag (15 unseen in total), the Z is the only 'power tile' unseen and there is an obvious 60pt ZO play available. Don't end up being given a nasty shock by something you could have predicted and prevented.

v) Once the bag is empty, you should know **exactly** which tiles are on the opponent's rack. This makes a crucial difference in many games. The Endgame chapter will teach you how to make best use of this information.

As an aside, once you have mastered tile tracking you will find that only one further small step is necessary for recording complete games as they are played, namely making a note of your full racks as they appear. You can do this either by writing down all seven tiles every time or simply making a note of the rack leave after every word played. For example if you held ABEFORT and played FOB you could record the move as FOB (AERT). The same as for tile tracking itself, it is all about getting into a routine of actions following every turn.

## Summary

- ⤴ Practice, practice, practice!
- ⤴ Tile track all the way through, not just at the end
- ⤴ Try keeping a copy of the board in sync with your tracking to make mistakes less likely and easier to identify when they do happen (this is optional).
- ⤴ Use the information you are gathering as much as possible. There is something to be gained from looking at your tracking grid on almost every turn after the third or fourth move of a game

# Time Management

Dave Koenig

Competitive Scrabble games are always played with exactly two sides and with a game clock to regulate the time of play, the same kind of timer that is most often seen in competitive chess. The game clock has two separate timers side by side with a button on each side. After each move, you press the button on your side, which stops your clock and starts your opponent's, so that the time only runs for the player who is on the move.

The standard time limit for almost all competitive Scrabble games is 25 minutes per side. The clock is only stopped to handle a challenge, settle a scoring discrepancy, or consult with the director in the event of a dispute. This generally means that a game takes no more than 50 minutes. If a player goes over the allotted 25 minutes, 10 points are deducted for each minute or part of a minute that he or she has gone over the time limit. In practice most games have no overtime penalties, and among experienced players it is rare to see a penalty of more than 20 points.

When most people start playing Scrabble casually with family and friends, it is often at a leisurely pace; a game may take a few hours. In comparison, the pace of competitive Scrabble can seem quite fast. While it may feel daunting at first, most players find that handling the clock and the time limit becomes natural after just a few competitive games. Most of this chapter shall focus on the basics of time management and is intended mainly for people who are new to competitive play. A section at the end of the chapter will be devoted to more advanced aspects of time management.



## Basic Procedures With The Clock

I strongly encourage you to start playing at a Scrabble club with experienced players before jumping into your first tournament. The tournament setting is not the best place to get your first experience with the clock, and in a club setting many players will be forgiving and helpful in directing you through the proper procedures on your turn as well as reminding you if you have forgotten to press your clock.

These days many players get started playing online, often in timed games that are as fast as or even faster than tournament time controls. Even if this is the case, it is still extremely helpful to get in-person practice using a clock before entering your first tournament. This is because online games take care of many of the mechanics for you, such as drawing tiles and scoring the plays, so almost everyone will tend to go slower in over-the-board encounters.

The basic procedure of events on most turns is as follows:

- 1) Record the score of your opponent's previous play and his or her cumulative score, if there was one
- 2) Search for and decide on your play
- 3) Place the tiles on the board
- 4) Announce the score of the play to your opponent
- 5) Press the clock
- 6) Record the score of your play and your cumulative score on your scoresheet
- 7) If the opponent has not challenged the play or said "hold," draw new tiles
- 8) Track tiles (if desired)

This procedure can seem complicated at first, but it will become natural quickly enough through practice. Ideally, you would like to have done this enough times in club games that it is natural by the time you play in your first tournament.

### **Saying "Hold" Or Challenging**

The order of events described above is specifically designed to give each player a grace period to review the validity of an opponent's play before the opponent has drawn new tiles. This is because you are generally not allowed to challenge a play after the opponent has drawn at least one fresh tile out of the bag. Regardless of how quickly you write down the scores, you should give your opponent at least 5 seconds to review the play before you draw new tiles.

If a player decides to challenge an opponent's play before the opponent has drawn new tiles, he or she may do so immediately by saying the word "challenge" and stopping the clock. However, players often want a bit more time to think over whether to challenge a questionable play. Saying "hold" is shorthand for "I am thinking about challenging your play, so don't draw your tiles yet." Your clock continues to run while you are holding the opponent's play. Strategy about when to challenge is beyond the scope of this chapter, but from a time management perspective, the main thing to keep in mind is that since holding time is on your clock, it benefits you to make up your mind whether to challenge sooner rather than later, in order to save your time for thinking about your own plays.

### **Basic Time Management**

Expert level games of Scrabble usually average about 12-13 moves per side, because the players play a greater number of long words and thus use up the tiles quickly. At the beginner and intermediate levels, games may tend to average a few more moves per turn, but not usually more than 15-16. Given the 25 minute time limit, this means you will have to average a bit less than 2 minutes per move. I find it helpful to keep that general guideline in mind throughout the game. If you spend more than 2 minutes on a single move, remember that you are borrowing time from other plays. Conversely, if you make a play significantly faster, you give yourself more leeway on other plays.

One of the simplest things that you can do to deal with the time crunch is to be in the habit of looking for your plays while your opponent is on the move. Certainly you need to take into account how the board has changed after your opponent makes his or her move, but there will be plenty of cases where you might see a good play during the opponent's time that is still a good play after the opponent has gone.

Even so, the pace may feel quick. If you are used to playing more slowly, as many players are

when they start, you may feel that you don't have adequate time to think about the possibilities and find the best play that you are capable of finding. That may very well be true. But one of the first steps in learning to cope with the pace is recognising that competitive Scrabble is more of a sport than an exact science. Your goal is not to find the best play that you can. *Your goal is to find the best play that you can in the allotted time.* As such, it can be helpful to practice playing a number of games with the clock, making sure that you can move fast enough and go through the mechanics (scoring the plays, recording the score, replenishing your tiles, etc.), and get to the end of the game within the allotted time, without putting too much pressure on yourself to win or even to play particularly well. Once you have gained some experience at moving at the necessary pace, then you can work on refining and improving your play within those time constraints.

I do not recommend that beginning players who are learning to cope with the clock bother tracking the tiles that have been played. Brett Smitheram has explained the huge value of tile tracking in a previous chapter and it is an important skill to learn, but if you're playing with a clock for the first time feel free to give the tracking a miss for the first few games. Tile tracking is an advanced strategy to be adopted only after you are comfortable finding plays and making moves at a fast enough pace.

Another thing that can help is taking less time on "easy" plays to save yourself more time for harder ones. Of course, whether a play is easy is relative to the individual player, but many times the easiest plays are when you have a seven letter bonus that you have already seen, and there is only one or a small number of places to play it. Since you get an additional fifty points for a bonus, it is almost always going to be the case that you want to play your bonus, so no sense in dallying about it.

"But," you might argue, "I have to find the bonus first! And that takes me some time!" This gets at an important truism about time management: it is easier to move faster when you are faster at finding the words. Refer to the chapter on word study for hints on what words to learn first to get the most bang for your buck.

In the end, these letters will help you most with time management: ACCEIPRT. They spell PRACTICE. You will be surprised to discover that the more you force yourself to play quickly, the better you will get at visualising the possibilities and finding plays. Again, this is a great thing to practice in a club setting, where other players can help coach you and will be less intense as you practice than they may be in a tournament.

## **Advanced Time Management**

For more experienced players or those who are curious about more advanced aspects of time management, here is a list of tips. Unlike the previous section, which was mostly general-purpose advice, this is more of a "bag of tricks," many of which may apply in specific situations and not in others. There is an important reason for that: the type of puzzle that you have to solve and its degree of difficulty is highly variable from move to move. There will always be some situations that take time because finding the plays is difficult or because there are just too many close plays to choose from, just as there will be cases where the right play becomes obvious quickly.

- If you are tracking tiles, try to do it on your opponent's time.
- Avoid placing your tiles down until you are sure that this is the play you want to make, and press your clock soon thereafter. This minimises the amount of your time that the opponent has to think about their response to your move.
- Develop an awareness of when the board is getting blocked up early, such that this is more likely to be a 17 or 18 move game than an 11 or 12 move game, and start upping your pace early in the game. If you do a better job of this than your opponent, often he or she will be the one

dealing with bad time pressure.

- If it is late in a game in which you are a little bit behind, suspect that you might have a bonus, and need a bonus to win, remember that it can be okay to go a little bit over the allotted time looking for it. If you find it you'll often win anyway, even with a penalty, but if you force yourself to stay within the time limit and not play a bonus, you will undoubtedly lose.
- More generally, don't panic in time pressure. There are many games in which you can afford to go a minute over your allotted time and still win, so don't let the possibility of it happening rattle you into making a mistake that costs you more than the 10 point penalty.
- Especially late in the game where there is one big scoring tile remaining, look to see if there is a particularly big "hot spot" for it. (For example for a 60+ point parallel play with the Q or Z on a triple letter square.) If there is only one spot, focus on plays that eliminate or block it, so the opponent can't get it, and don't waste time on other ones. If there is more than one and you can't block them all, consider playing a lot of tiles to give yourself a chance to get to that power tile first.
- There are times, especially early in a game, in which you have many different bonuses with a blank. Sometimes it is the case that you can tell that there might be a bonus that scores just a little bit more than what you have found already, but remember that if you spend several extra minutes for just an extra point or two, you might actually be hurting your chances.
- Racks with a blank (or two) can be some of the biggest time eaters, but a good general guideline is to imagine first that the blank is a vowel if your rack is more consonant heavy or that it is a consonant if your rack is vowel heavy.
- If you have spent a couple of minutes looking for a bonus, it may be time to give up and move on. Your chances of finding a bonus tend to decrease the longer you spend – it may be that there just isn't a bonus in a rack, as friendly as it may seem.
- Be aware of when you are playing a particularly fast moving opponent who will tend not to give you as much of his or her time to think on. You may need to get in the habit of moving more quickly against such opponents to avoid getting in time trouble.
- Conversely, if you notice that an opponent is going particularly slowly or has made a mistake in his or her tracking and seems to be fumbling with his or her scoresheet to fix it, moving quickly can put the time pressure onto him or her. Weigh this advice carefully: you don't want to move so quickly that you cause yourself to make errors, but sometimes the clock can be your friend.
- If you are really in a time pinch in the endgame, putting the tiles upside-down on your rack might help you transfer them to the board faster if the opponent has turned the board away from you.
- Strong players tend to develop an intuition for how much they should be scoring based on the dynamism of the board and the letters on their rack. This can often be a good guide as to whether they have found the best scoring play or something reasonably close to it. Sometimes your gut might tell you that there's something much better to find here and it's worth taking the extra time. Other times it might say that what you have found is good enough, so move on and save the time for later plays.

# Setups

Kenji Matsumoto

The X and the Z are two of the most valuable tiles in Scrabble, but sometimes you'll find that there are no good options. What do you do? Some players give in, playing these valuable tiles for 20 points (or even less). Other players hold onto them, hoping that a good opportunity to score with these tiles will arrive soon; a hope that often ends with these players being bitterly disappointed.

However, there is another option: you can create your own place to play your high scoring spot to use these tiles next turn. By taking a few less points this turn, you can create a spot for your high-point tile. This tactic isn't just reserved for the Z or the X: it can be used with the S, blank, or just about any tile!

Setups are one of the most interesting and fun types of play in Scrabble. Setups create a better scoring or bonus spot for the remaining tiles on your rack. Whether you have a bonus leave, a high point tile, or have a case tile in the late game (the last of a certain tile remaining) setups can help you score!

Before making a setup, you want to make sure that your play fulfils certain criteria. While setups are often crafty, sometimes the clever play isn't necessarily the best play. To be effective:

1. Setups need sufficient rewards to justify the point sacrifice. It's not worth taking a big sacrifice in points or leave if you're only going to score a few more points next turn. If you make an 8 point play to setup your X and it scores 50 points next turn, that's still only averaging 29 points a turn, which is less than an average turn for expert players. Making a big point sacrifice is not worth it unless you have no other palatable options.

2. Setups need to be difficult to block or detect. If not, your opponent will block the setup extremely often, and your setup efforts will be completely wasted.

3. Setups need to be difficult to use, either for your opponent's likely tiles or by random tiles remaining in the bag. If you're going to make a setup, you want to be the one reaping the benefits. Far too many players make setups hoping to score big next turn, only to actually allow their opponent to claim the setup and score big themselves.

That being said, setups are a great way to maximise the value of high point tiles (such as the JQXZ) as well as potential S hooks or case tiles, particularly in TWS alleys. They can make bonuses significantly more likely, ensure that you outrun opponents when you have a lead, or force your opponent to sacrifice points; all of which can help you win more games.

Setups take many different options and forms. Mastering all of them is essential if you want to be a master of setups. Some of the most notable types of setups include:

## The S-hook Setup

By far the most common type of setup, S-hooks are utilised by playing a word that can be pluralised with an S and placing it one letter before a lucrative bonus lane or scoring spot, such as a TWS alley. This allows you to potentially use your S to score, either by combining your S with scoring tiles and hotspots to make a high-scoring play or by playing a bonus and earning an additional fifty points.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W				3L				3L				2W	
3			2W				2L		2L					2W	
4	2L			2W				2L				W			2L
5					2W						M	I	R	V	
6		3L				3L				3L		L		3L	
7			2L				2L		2L			L	2L		
8	3W			2L				W	O	R	R	Y			3W
9			2L				2L		2L			U		2L	
10		3L				3L				3L		R		3L	
11					2W							U			
12	2L			2W				2L					2W		2L
13			2W				2L		2L					2W	
14		2W				3L				3L				2W	
15	3W			2L				3W				2L			3W

**Rack: AMRRSTV**

In this case, you can play the word MIRV 5k and set up the MIRV-S hook, allowing you to use your S in the TWS alley next turn. With some draws like a Z or K, you can make a high scoring play like KARTS or TZARS, while with other draws like an E or an N you can potentially play a bonus and score 50 additional points!

The best part of setups like these is that they don't even necessarily need to be used on your next turn; you can always save them for later if you don't draw a bonus or a high scoring play. These sorts of hooks don't need to be used next turn to be effective: so long as your opponent doesn't have an S, (or elects not to use it) this will remain a viable scoring and bonus threat for a future turn.

While your opponent could have an S themselves, it's still definitely worth the risk. In general, it's a good idea to create openings for yourself unless you have a strong reason to believe that your opponent is capable of using the opening for big points next turn.

## The Hook Setup

While S-hooks are an extremely common form of setups, many players forget about the utility of simple hooks that are not S-hooks, both at the beginning (front hooks) and end of words (back hooks). Much like the S, these hooks can be used several turns down the line, and are often much more difficult to see than simple S-hooks. These hooks can also prove to be useful setups as they enable high scoring options especially with the right letters remaining in your leave.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W				3L				3L				2W	
3			T				2L		2L					2W	
4	2L		W	2W				2L					2W		2L
5		R	I	N	K							2W			
6		3L	R			3L				3L					3L
7			L				2L		2L					2L	
8	3W		S	H	O	T	T	E	N				2L		3W
9			2L	O			2L		2L					2L	
10		3L		P		3L				3L					3L
11				P	2W							2W			
12	2L		B	E				2L					2W		2L
13			A	D			2L		2L					2W	
14		2W	B			3L				3L				2W	
15	A	I	Y	E	E			3W					2L		3W

**Rack: RNKDOR?**

In this case, you can play the word RINK at 5b and set up your D in the triple word alley. While your opponent might have a D, there are only 2 Ds remaining, making your opponent unlikely to be able to use the D hook or block effectively.

RINK is made significantly stronger that it's early in the game and there are only two hooks available, as one D, both Bs, and both Ps have already been used. If these tiles were not yet played, DRINK would be a stronger play since it scores 4 more points and prevents the potential hooks for your opponent.

## The Parallel Play Setup

Parallel play setups increase the value of a remaining high point tile on your rack, such as the J, Q, X, or Z forming short lucrative options using premium squares such as the TLS or DWS. When executed correctly, these parallel plays on your next turn can easily score more than 50 points.

Parallel play setups are dangerous since it's likely that there are many other tiles that can be used by your opponent to take the setup themselves. Because of this, you don't want to sacrifice too many points to make the setup unless it's difficult for your opponent to use (i.e. AD(Z), MU(X), (J)AI, etc.)



In this case, the word JOIN not only scores well (49 points), but also creates a setup option for your Z next turn to score 66 points by playing ZA at 6j.

Some players back away from plays like this because they see that their opponent can use the spot with combinations such as FA, WH, CL, BR, etc. While there are several possibilities for your opponent to use this spot, there will certainly be times that your opponent doesn't have any of these combinations (or the O/A for the NY front hook) or they will elect to use a different scoring spot, such as the 8a TWS.

Just because your opponent can block doesn't mean they will, and even though there is a risk of your opponent using this spot, again the risk is worth the likely reward. Even if this spot is only available 60% of the time next turn, that's still a 60% chance of having a 66 point play.

## The Late Game or Endgame Setup

This type of setup occurs due to the distribution of tiles remaining in the pool. This can be found after you had previously tracked tiles during the preendgame or endgame, taking advantage of having full or partial knowledge of your opponent's rack. Knowing what your opponent has (and more importantly, what your opponent *doesn't* have) can aid you in figuring out whether or not your opponent will use (or block) your setup.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				A	Q	U	I	F	E	R	S
2		2W				3L				3L		E		2W	T
3			2W				2L		2L			E	H		I
4	2L			P	O	O		2L				S	O		M
5				I	N	D	U	N	A		2W		P		Y
6		R	E	X		3L			C	O	C	O	A	3L	
7			2L			E	U	G	H				K		
8	3W			B	A	T	T	I	E	R		2L			W
9			2L			I	2L		D	E	C	L	A	R	E
10		3L			B	O				3L				3L	I
11					A	I					2W				Z
12	2L	O	U	I	J	A		2L				G			E
13	N	Y	M		A	T	2L		2L			V	I	A	N
14		2W			N	E				3L		V		2W	
15	3W			2L		D	I	F				R	E	N	T

Rack: REXGLOW

Pool: ELLRS

In this case, the best play is REX, setting up the word GLOW forming the GREX hook. This is a strong play because you know your opponent's tiles, and thus realise that there are no good scoring or blocking options to the G-REX hook. Normally, you wouldn't make such a cheap setup: REX is only 24 points, and the G hook isn't likely to score much more than 35. But given that you know your opponent can't use or block it effectively since it's the late game (and the tile pool is limited) a setup becomes a lucrative option.

## The Extension Setup

Extension setups are plays that set up potential high-scoring extensions on future turns. This type of setup, while potent, is extremely rare, as they often require you to draw a tile to be completed and rarely score enough points to be worthwhile. That being said, from time to time these setups can be effective, especially on closed boards where scoring options are scarce. That being said, it may take several turns for you to draw the tile(s) necessary for you to hit your extension setup.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			P				3W				2L			3W
2		2W		U	3L			I	3L					2W	
3	J	U	N	C	T	I	O	N	2L				2W		
4	2L			K			V					2W			2L
5					2W		Q	I			2W				
6		3L				3L	U	T	3L						3L
7			2L				A	E	2L				2L		
8	3W			2L			T	E				2L			3W
9			2L				2L		2L				2L		
10		3L				3L				3L					3L
11					2W						2W				
12	2L			2W				2L				2W			2L
13			2W				2L		2L				2W		
14		2W				3L				3L				2W	
15	3W			2L				3W				2L			3W

**Rack: AGMNORT**

In this position you could play JARGON in column a (and leave a better vowel-consonant ratio) but instead should elect to play MAJOR, retaining the possibility of playing MAJORING next turn for 54 points with an I draw. In the case of extension setups, you can conceivably fish for this setup on future turns even if you don't draw the I next turn, especially since scoring a lot of points on this board is somewhat difficult.

These are just some of the many types of setups you might encounter in a game of Scrabble. By looking for the opportunities to play a setup, you can maximise the potential of your rack and give yourself even more opportunities to maximise your score!

# Board Geography

Edward Okulicz

Understanding and taking advantage of the geography of a well-populated board represents a challenge for any improving player. Part of the challenge is psychological – it's important to let go of ingrained bad habits such as knee-jerk blocking or playing each game using the same strategy. The skill component comes from learning to find and make the right decisions between moves which have distinctly different outcomes for the board, your rack, and the score.

It pays to remember that while your rack is your own, the board is a shared resource that you can seldom control completely. The best players exercise a degree of control to win games from seemingly impossible positions and close the door on their opponents' winning chances. Skillful management of both open and closed board situations is about making the move that is most likely to win the game - "playing the percentages". The technique of evaluating your move for score and leave still apply, but there are times when you might need to pay attention to other considerations, or even ignore principles that usually serve you well.

The good news is that you can improve board management by obeying a number of rules of thumb. The complication lies in that sometimes the rules of thumb suggest doing different things; learning which considerations to give more weight to is a skill you will develop as you play more games. The best human players routinely perform this task better than computer opponents, and it's an area in which you can improve without learning a single new word.

## Open boards

An open board is one where there are many opportunities for high scoring, where smaller leads can easily be overcome by playing a seven-letter word or making judicious use of premium squares or overlaps. A very open board is one that cannot easily be shut down in a small number of moves.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
1	3W			2L				R				C			F	
2		2V				3L		O		Z		O		W	O	
3			2W				2L	N	E	A	R	L	I	E	R	
4	2L			2W				E		T	A	T		E	D	
5					2W					I	T			D	O	
6		3L				3L				3L	I			3L		
7			G	U	E		2L		2L		N		2L			
8	3W			H	E	M	P	Y			G	A	U	G	E	
9			2L		N	Y	2L	U	V	A	S		2L	A		
10		3L				3L				3L				M		
11														B		
12	2L			2W				2L			D	E	X	T	E	R
13			2W				2L		2L		R	U	E	S		
14		2W													2W	
15	3W			2L				3W				2L			3W	

This is an example of a board which has many lanes open in which bonuses could be played, the most obvious of which are indicated by lines, including a particularly nice one on row 11. It's not full of high-scoring opportunities other than that - but don't discount the possibility of a double-double through EEN. Faced with this board position, you would be unable to shut down all the attractive lines with a single move. Attempting to block all of the bonus spots would result in low scores and wasted turns. A lead of 50 or even 100 points may not be secure under these circumstances.

## Closed boards

Closed boards are ones in which there are few scoring opportunities. Be aware that it's quite uncommon to see a board from which it's not possible to create one or more openings with a single move. Also, watch out for setups where your opponent may have the final blank or S, or unique hooking letter (for something like MY-C or D-JINNI). The use of a tile like V or C in an open area can create closed boards, but take notice of the possibility of playing a small word which makes a double-sided opening:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W				3L		V		3L				2W	
3			2W				2L	A	2L				2W		
4	2L			Q	U	O	I	N	S			2W			2L
5			P	I	T	H		T	A		2W				
6		3L					3L	W	A	D	Y				3L
7			2L				2L	G	I	E			2L		
8	3W			2L				F	E	S	T		2L		3W
9			2L					E	S	T			2L		
10		3L			J	I	Z		S	3L					3L
11		R		C	O	T						2W			C
12	D	I		H	E	A	P	Y					2W		O
13	W	A	V	E	Y		2L	E	2L				G	U	R
14	A	L					3L	F	L	A	X	E	N		M
15	M			2L				L		U	T	U			K

This is a relatively blocked board containing just one easy bonus alley through the V (though a blank could be used as an H to facilitate a play from (o5)). However it could be blasted wide open by dumping something like AVE (2g) through the V for 6 points, opening two nearly unblockable bonus places. This sort of play is most common around tiles that have blocky qualities. Conversely, this board could be strangled further with a play like GUV (2f) making it harder still to place a bonus.

## Semi-open boards

These categories are not scientific, but there are some boards that fall between being open and closed. They might be boards in which there are only one or two real opportunities for points, or ones in which the opportunities are restricted to the player who holds a certain tile. A board which has just one bonus spot available should be closed down by the player who has the lead in almost all cases. Yet, if that player is holding the final blank and all the S's are on the board, if the spot is a line for a seven ending in S, there's no need, as this line is a one-way hotspot only useable by that player. Good strategists are always on the lookout for possibilities to create spots to which they will have exclusive access.

## **Don't worry too much about the shape of the board at the start**

Throughout the first half of a game, the board usually offers several scoring opportunities every turn and your main focuses should be score and rack leave, rather than limiting scoring spots or intentionally creating new ones. Of course, if you are ahead and can find a move which scores and blocks, then go for it! But it's likely that early on in the game you can't have that much influence on whether the board is open or closed with a single move. Even playing parallel to another word isn't a security blanket; you may take out easy floaters, but you might be exposing even more lucrative overlaps, or perhaps an easy two-letter word to play a nine through (like ED, ES, IN, RE or UN). Cultivating a closed board is quite difficult to do and yields limited rewards.

## **Open up when behind, block when ahead**

The difference in score is a huge but not completely overriding consideration. It is important that you don't overreact to a situation and start making crazy openings when you're only a small amount behind, or that you abandon scoring for the purposes of blocking just because you have a small lead. Consider the range of likely responses and make a decision on that basis.

In the middle of well-played game, both players should average about 40 points per turn. Some of these plays are bonus plays, but good players are scoring in excess of 25 points even on their ordinary moves. If you can continue to score well while keeping a lead larger than a bonus, you'd be better off doing so. If we say that the average bonus is worth 75 points, and you currently lead by 100, a play of 40 points will make your lead close to two bonuses; this would in most cases be wiser than playing a 15 point blocker. Further, after your opponent plays a bonus, his rack on average will be worse than yours, and the likelihood is that the next bonus will be yours.

When you have a lead, it is important not to abandon solid scoring, but you may wish to do so with an eye to restricting openings for game-changing plays. This usually means seven-letter words, but not always. A better way of thinking about this is that you are trying to reduce volatility. It might be smart to block the best hot-spots, particularly if the tile required isn't on your rack, but other than at the end of the game, it's seldom the best move to play a short blocking play when you have a higher scoring play available somewhere else.

## **Open up when you have a good rack, block when you don't**

If you have a 100-point lead and the board is fairly open, you could try to pick off the openings one by one, but this might take you three moves in which you score just 30 points in total, while your opponent scores 40 each for two heavy letters and then squeezes an unlikely bonus in between them. Your lead is just a distant memory by this point, and you might have a poor rack because you've used your more flexible tiles to block. The time when you have a strong rack which might feature a blank and flexible letters for bonuses or hooks is the time to be offensive – groom your rack for a bonus, open up a spot, try to make a hook only you can use. You benefit in multiple ways – you increase the chance of getting a high-scoring play to put your lead beyond doubt, and you also may pressure your opponent to abandon their plan to try to thwart you. You may also find that your opponent's big-scoring play opens up one for you to return to a lead.

The key here is to be offensive but not rash. The degree of risk you should take depends on what you have and what is to come. If you have the final S, you can be more cavalier about opening, as the risk is less, yet the reward potentially high.

Sometimes the choice is easy – if you have a 50 point deficit and a good rack, opening or preserving existing openings is a no-brainer. Conversely, if neither your board nor your rack are conducive to bonuses, trying to keep the board closed is good strategy. But if one rule suggests

one strategy and the other an opposing one, you have to weigh up what the most likely outcome is based on the state of the game, the score and your rack.

### **Don't just make any opening; make the right one at the right time**

Just because you're behind doesn't mean that you have to open instantly. If the score and rack from a move are poor and aren't going to form the basis of a decent score next turn, it might be better to massage your rack into one that can take advantage of other spots available, or create better openings tailored to the tiles you leave behind. It might be worth playing a few tiles if a modest score is available in the hope that a power tile may land on your rack that gives you more opportunities. Towards the end of the game, if you are still behind, you may have no choice but to open up a chance at an all-or-nothing play because the game is lost without it. This should not generally be done early on in the game. The important thing is that if you play a move whose only purpose is to open the board, the play should be difficult to thwart, open multiple spots, or create a new spot distant enough from an existing one to make blocking both spots impossible.

### **Don't let picking the "wrong" move ingrain bad habits**

You've just had a tight game where towards the end you opted to block, and your opponent played a bonus anyway. Or you opened for your own bonus and got smacked by a big Z play. Or the TWS your opponent opened gave them a large bonus. These situations aren't fun, but that doesn't mean that the move you played was wrong. When you don't know exactly what your opponent has, you can only make educated guesswork. It may be that the play you made was the one that would win the most often. Don't let these instances weigh on your mind and make you retreat into a defensive shell every game, or at the opposite end of the spectrum, fail to consider how you might block intelligently.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W				3L				3L				2W	
3			2W				2L		2L				2W		
4	2L			C				2L				2W			2L
5				H	2W						T				
6		3L		E	F	3L				3L	R			3L	
7			2L	A	L		2L		Q		A		2L		
8	3W			P	A	T		F	U	D	G	Y			3W
9			V		S	I	2L		O		E		2L		
10		3L	E		H	M			L	3L	D			3L	
11			I		E	E		A	L		Y				
12	W	I	N	O	S			Z				2W			2L
13			I				J	O	W				2W		
14		2W	E			M	U	T	E	R				2W	
15	B	a	R	G	A	I	N	E	D			2L			3W

**Rack: EKORRST**

**Score: 215-270**

This board is relatively closed, because while there are some bonus lines available, they are either low-scoring and likely to permit high scoring counterplay (using the C of CHEAP or the T of TRAGEDY), or difficult to use (using the W of WINOS.) While the rack yields the bonus STROKER, it's going to be particularly difficult to place a seven letter word on this board unless an opening is made. For that reason, you wouldn't consider a water-treading play like 14A OKE, because while 28 points isn't bad on this board, the leave of ERRST (while generally acceptable, if consonant-heavy) will have limited scoring potential in future turns, and you're still behind.

It would be better to massage the rack in such a way that a bonus line is created while the bonus potential is retained. When doing this, it's good to take stock of the remaining letters to ensure that not only are you keeping the best letters, but you're also creating an option the opponent is unlikely to use. Looking for S-hooks is a good way to start. Here, there's only one S unseen, along with the blank, so playing a short word that takes an S is likely, though not certain, to remain available to you next turn.

Using general rules of thumb about rack leave, it would be good to offload one of the Rs, and the high-scoring but inflexible K. Two possibilities present themselves at J8 using the D of TRAGEDY - DORK and DREK. An E is almost always better than an O, and doubling the E would be fine but doubling the O wouldn't be as good. It's also slightly harder to effectively block DORK without slowing down scoring - a play down from the K wouldn't stop a bonus ending in an S, plays that go onto or through the K often permit a triple-file response, and horizontal plays underneath DORK would be low scoring. It's slightly easier to play underneath DREK than it is DORK, because more tiles go after the E in third position of DREK than under the R in the third position of DORK. Happily, this move can also be found by just keeping the best letters on the rack

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	B	E	E	P				3W			D	O	P	E	Y
2		T	R	O	O	Z				Q	I		U	H	
3			F	A	N	O	2L		V	I	G	O	R		
4	2L			2W		A		2L				V			2L
5					C	R	A	B	L	I	K	E			
6		3L				I				3L		R		3L	
7			2L			A	2L		2L			L	2L		
8	3W			2L					I	M	A	G	E		3W
9		U	N	b	U	I	L	T	2L			N	2L		
10		H	O	Y		3L				3L		T	A	J	
11			W	E	X						2W				
12	N	U	T	S				2L				2W			2L
13	E		2W				2L		2L				2W		
14	I	2W				3L				3L				2W	
15	F	O	R	E	N	S	I	C				2L			3W

**Rack: AAEINRS**  
**Score: 360-395**

This is another closed board on which you hold a frustrating "almost" rack - AEINRS combines with most letters - but regardless the duplicate A needs to go. Similar to the example given a few pages ago with AVE, the blocky J actually permits a beautiful opening fork -- n9 AJI. This word takes an S, and there is only one other S unseen, but even better, opens the O column for a bonus on a triple.

There are very few scoring possibilities for a rack of one pointers, and plays that open up by solely playing down from the J don't open on both sides and permit big responses (for instance, JARINA) or ruin the rack's power (like JEANS or JANES). AJI breaks up the As and avoids fishing to the tantalising but risky AEINRS when the only other floater is the A of IMAGE. A play like AJI is not impossible to block entirely, but it relies on the opponent having just the right tiles to do it. For instance, BH(AJI)A through a play of AJI would restrict the opening for hooking sevens, but it's not possible for the opponent to have this play.

**Blocking is usually only best if you can do it quickly and effectively**

Much the same as the previous tip: a move that has no purpose other than to block has to be decisive. If there are multiple spots open and your lead is modest, you must choose a move that blocks all or nearly all of them. It cannot be reiterated enough that there is no point to getting a modest lead and then frittering it away blocking hotspots one by one.

That word of caution aside, often it is possible to find simple plays that land the killer blow on your trailing opponent. This is far more common towards the end of the game than the beginning of it.

This is an example of an effective blocking play:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
1	3W			2L				3W				2L			3W	
2	I	2W				T				3L				2W		
3	N		2W			E	2L		2L					2W		
4	V			P		I		2L				2W			W	
5	O			E	2W	I					2W				I	
6	k	3L		G	E	D				3L				B	Y	S
7	E	T	2L		A		2L		2L					R	E	
8	D	E		F	R	A	I	L				Q	U	I	N	T
9		T	2L		B		N	E	K		U		S	T		
10		H		G	U	V		P	O	X	Y		A	A		
11		E			D			O			T		N			
12	F	R	O	G	S			O	R			E	2W	C	2L	
13	O	E	2W			W	H	I	Z					E		
14	A	D				3L	I	N		3L				2W		
15	M			2L			A	E				2L			3W	

**Rack: AJLMORS**  
**Score: 376-370**

What are the threats on this board? There is a blank unseen and only 14 unseen tiles. It's close enough that a bonus from the opponent is likely to be decisive. Most obviously, there is the possibility of using the blank to hook an S onto QUINT - you hold the final S.

The first three letters of TEIID can be used to build an eight letter word. Less likely, a bonus could use WIS -- either by hooking it to IWIS or YWIS (using a blank in the latter instance) or playing onto the W. Even less likely would be a nine letter word.

Looking at this in the "score and leave" sense, it would be tempting to play C1 MAJOR to keep the S (for a SQUINT play of our own), drop the J with JIN and hope to get a bonus, or hook the S on BRISANCE. But these do little to defend the lead, even as they do extend it, and when you can control the board, it's better to consider how likely you are to win the game rather than just racking up the points. The stand-out play is therefore one that minimises all the threats. A six letter word from J3 will block the floaters of TEIID, anything involving WIS, as well as capitalise on the S/QUINT hook, such as JORAMS or MAJORS. JORAMS is slightly better than MAJORS as the latter puts the J next to a DWS, and the opponent could surpass the score with a play like K2 CAMA. The win isn't guaranteed, but it is extremely likely because the opponent will find it very hard to open up another alley for a bonus, even with the blank. MORSAL at 14J results in a larger average margin of victory, but is vulnerable and will frequently lose if your opponent plays a bonus.

### Consider both counterplays and your next move

The layout of the Scrabble board means that for most attractive spots, the word played there will open up parallel or perpendicular counter-opportunities for your opponent. A play to a triple-word score may open up a place for an eight-letter word, or a bonus may expose premium squares that might permit an easy 60 points for a Z or Q. Blocking one move may expose another risk; opening up for your rack might play into your opponent's hands. But you also need to consider your options for the next move. Opening up a new bonus spot is well and good, but you might be playing off the

very tiles that form the foundation of many bonuses. You may also be scoring so few points that your opener plus your bonus will barely outscore two average moves, and in this case, you're taking a risk for minimal reward. Scrabble strategy is holistic; even when considering board management, don't stop considering more mundane concerns such as score and leave.

### **Don't be a knee-jerk blocker!**

A former club-mate of mine used to tell new players words to the effect of "always block a triple-word score square". This isn't good advice, and if that's your tactic, an opponent can readily distract you from their set-up or bonus spot by letting you have a cheap 15-30 point play on a TWS. The average score of a top-level player mid-game is in excess of 40 points, so a solitary TWS is unlikely to be a big deal unless you let it prey on your mind. Indeed, if you've got a lead, you have more to fear from a bonus line than a TWS. And if you're behind, your opponent scoring a measly 21 points using a spot you have no interest in is exactly what you want to happen. Don't let one particular spot on the board take the focus away from other spots which may be more significant to the outcome of the game.



*Play too defensively and every game will end up looking like this*

### **Opening a second spot may be better than blocking the existing one**

Certain kinds of hot-spots can be difficult to block. A floating vowel in a dangerous place may be difficult to block without sacrificing score if your rack is also filled with vowels. You may be unable to take out a floating consonant if your rack is also consonant-heavy. It's times like this you should consider whether that hot-spot is worth blocking at all. Sometimes there are other spots on the board that will permit scoring opportunities on your next turn even if the most attention-grabbing is taken. It might be better to work towards maturing your rack to use one, or if others are unavailable, to create one:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W				3L				3L					2W
3			2W				2L		2L					2W	
4	2L			2W				2L					2W		2L
5					2W							2W			
6		3L				3L				3L					3L
7			2L				2L		2L					2L	
8	3W			Q	U	A	F	F				2L			3W
9			2L			H	E	A	P				2L		
10		3L				A	I	R	W	A	Y				3L
11					2W				R	E	J	O	I	C	E
12	2L			2W				2L		H	O	X			2L
13			2W				2L		2L					2W	
14		2W				3L				3L					2W
15	3W			2L				3W				2L			3W

**Rack: EEGKNSY**  
**Score: 119-169**

Despite the tempting E in the triple file, it's not possible to score heavily off it by doubling the K or Y and tripling the word. The only play that uses both those tiles in the O column is KYNE. The leave of EEGS is not bad, but it's not terrific, though the score is enough to win about a third of the time in a simulation. And while an E next to a DLS in a TWS row or column could be a big deal, you actually have about the same chance of drawing level by taking a different tack and playing a word to open another spot, such as 11A GEEKY.

This play actually scores 3 more points, keeps the nice two-tile keep of NS, and these go equally well with the existing E floater and the newly-created G floater. While your opponent will score more on average, you will also score more on subsequent turns, and when slightly behind, defence should not be the automatic consideration. It's worth noting that only the Z remains of the heavy letters, and words that double the Z and triple the word exist (ASSEZ, ENTREZ, REZONE or BEZOAR, for instance) these would require the opponent to have specific, unlikely, racks. These two plays might look at first glance to be mismatched, with KYNE considerably better on the basis of its superior defence, but a simulation shows this is something of an illusion and prefers GEEKY.

# The Endgame

Paul Gallen & Geoff Thevenot

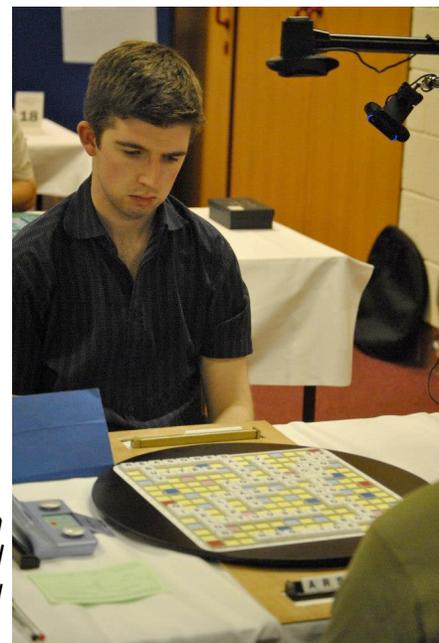
*Editor's note: At the end of a game the player making the last move is rewarded with double the value of the unused tiles on the opponent's rack. In North America this is calculated by adding double the value of those tiles to the score of the person who played out; in the rest of the world this is calculated by adding the face value of the tiles to the score of player who played out and deducting the same value from the other player's score. The effect on spread (winning margin) is the same in either case.*

The endgame - the final portion of the game when no tiles remain in the bag - can be one of the most elegant, complex and enjoyable puzzles Scrabble has to offer. Yes, many Scrabble games are pretty well decided before the tile bag is empty, but in as many others these final decisions are the most crucial ones you will make in the entire game. One good move can steal a victory in a game that looked hopeless just a few minutes before; one poor move can throw away a sure win you've worked the better part of an hour for.

Not only that, the nature of the game changes. During most of a Scrabble game, words and probability are foremost in our minds, and while we spend some time considering our opponent's position, there are sharp limits to what we know about what our opponent is trying to do. But as we get closer to the end, we have to start seeing the game from both sides more and more - and by the time the bag is empty and (assuming we've tracked tiles correctly) we know what our opponent holds, we are playing a different sort of game. The endgame is the closest thing in Scrabble to games of pure strategy such as chess.

*Endgame Principle #1: In the endgame, you are playing the game from both your own perspective and your opponent's.*

Every endgame boils down to finding what sequence of moves will net you the most points: "If I do this, then he does that, then I do this..." and so on. So you are in effect playing out the remainder of the game in advance, both from your own side and your opponent's. Some endgames are straightforward, but many others can require some involved planning and calculation. This is why it is a good goal to play the earlier portion of the game quickly enough to leave yourself enough time to think the endgame through properly. You might not need the extra time later, but trust us, you don't want to be facing a tricky win-or-lose endgame with 30 seconds on your clock.



*Paul Gallen considers a crucial endgame at the British Matchplay Scrabble Championship (2012). The overhead camera is part of the Scrabcast equipment for broadcasting live tournament games online.*

*Endgame Principle #2: It is almost always to your advantage to be the player going out first.*

When you're the one making the game's final play, in addition to the points you score, you will benefit in two other ways: first, you net twice the value of the tiles your opponent has left, and second, you deny your opponent the chance to score with those tiles.

These advantages can add up to quite a lot. For example, let's say your opponent has made a play that leaves her with three tiles: ENW. You have ADHN left on your rack, and now it's your turn. You are behind by 20pts. You see that your opponent can play out with NEW in two different spots, for 14pts in either. You see one place to play HAND - you'll score just 12 points, but you'll play all your tiles and be first out. It's a clogged-up board, but you spot a place to play NAH for a whopping 37 points. Surely it can't be right to forgo 25pts staring you in the face in a close game, can it?

Well, let's work it out. If you play HAND for 12, you'll get those 12 points plus a net gain of 12 more from your opponent's rack (ENW having a face value of 6pts), leaving you 24pts better off than you are now - enough for a four-point win. If you play NAH for 37, keeping the D on your rack, that puts you 17 ahead of your opponent. She will respond by playing NEW for 14pts and going out, leaving her 3 points behind. Then she gets the value of your leftover D, netting 4 more points for herself - and you've lost by a point!

The principle of going out first will help guide you to the kind of questions to ask when planning your endgame: Can I go out right away, in one move, or will I need two or more? If I will need two or more, is it possible for me to block my opponent's outplays until I'm ready to go out? If I can't stop my opponent from going out before me, how many points can I net for myself before it happens? If there isn't a two-turn sequence available on the board that allows me to go out, is it possible to use my first move to create one? Can I tempt my opponent into making an inferior play that will allow me to go out first instead of him? Let's look at a few strategies we might consider along the way:

## **OUT IN ONE**

The simplest endgame, though not always the easiest (more on this later), is the out in one. Find the highest-scoring play that uses all your tiles, make the play, game over. However, you should keep in mind that even if you can play out in one turn, there might be a better sequence available by playing out in two or more moves instead. This is particularly true when your opponent's tiles are unwieldy - say, four consonants - and so you know he won't be able to play out right away himself.

## **OUT IN TWO**

This is the most common type of endgame sequence; often you can't go out in one move, but you can usually go out in two moves if your opponent can't go out in one move either. Your opponent will likely be looking to stop you from going out, so you'll have to find a sequence that either gives you two or more places to play your remaining tiles on move two (making sure your opponent can't block all your out plays with a single move) or gives you a spot that your opponent can't block at all. These spots can be already available on the board, or you can find a first move that creates a new spot. The most important thing to remember is not to jump on the first good play you see, but rather to take the time to work out the sequence including your opponent's best possible response and know for sure whether you are guaranteed to be able to go out in two or not.

After you've got a two-move sequence you're sure will allow you to go out, it is also worth checking to see whether the two plays would be better played in the reverse order. For example, if your first play gives your opponent a new place to score ten more points than she otherwise could on the

resulting board, maybe playing your planned second play first instead is the better choice.

A couple of excellent examples of well-executed two-move endgame sequences follow:

Lewis Mackay's endgame vs Austin Shin at British Matchplay Championships 2011 is an example of these fundamentals executed nicely. Austin has just played YUCA (a12) for 39pts to take a 23 point lead. Lewis holds EEEOORT and Austin holds BCILRS with the bag empty. How can Lewis win this match?

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	F			2L				A				Y	M	P	E
2	L	2W				3L		Q		3L				I	2W
3	E		2W	H	I	N	A	U	2L		V			D	
4	A	I	N	E			G	A	R	M	E	N	T		2L
5	P				2W						N		O		
6	I	3L				P	R	I	V	E	T		W	3L	
7	T		K	O	T	O	2L		2L			A	N		
8	S			B	O	D	G	E				L			3W
9			W	A	G	S	2L		2L			D	2L		
10	D	Z	O			3L				3L		R		3L	
11					2W						X	I			
12	Y			2W				2L			H	U	N		2L
13	U		2W				2L		2L	A		S	2W		
14	C	O	U	L	E	E	S			J				2W	
15	A			2L			T	R	E	I	F	A			3W

Lewis' rack: EEEOORT

Unseen: BCILRS

Score: 372-395

Austin cannot go out in one from BCILRS, but as you may have seen there are many sequences whereby he can go out in two. Therefore Lewis must go out in two moves and catch Austin with some of his unplayed tiles. There is only one way of doing this and Lewis finds it. REVERE (i4, 21pts). This leaves OOT with 20 points available at 11b or 17 points available at n5. Austin cannot block both or score well enough to outpoint him. Lewis won the match by 11 points and went on to win this tournament. You may be thinking that you haven't heard of BODGER. However, if this is the only way to win, you may as well go for it and keep your fingers crossed!

Trevor Halsall vs Panupol Sujjayakorn's match at the Causeway Challenge 2010 is another example of the importance of going out in two moves in many endgames. Trevor holds CDINNRZ and trails by 4 points. Panupol holds CEIRUV and with such a balanced rack is able to go out in 2 moves. Trevor must go out in two moves himself therefore and catch Panupol with some of his letters.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			G
2		2W				3L				3L				2W	A
3			A	M			2L	L	E	V	I	T	I	E	S
4	2L		P	O	P			2L				E			H
5			E	M	U						A	X			
6		3L			N	3L				3L	E	T		3L	T
7			2L		T		2L	B	O	W	R		2L		R
8	3W			F	O	L	K	Y			A	J	I	V	A
9			2L	U			2L		2L		T		2L		W
10		3L		S	Q					N	O			3L	L
11				A	2W	I				E	R				N
12	D	E	B	R	I	S	E	S		D		2W			E
13			2W	O			2L		2L	D	A		2W		T
14	H	O	O	L	I	C	A	N		Y	U			2W	
15	I	F		E				3W			A	G	O	G	E

Trevor's rack: CDINNRZ

Unseen: CEIRUV

Score: 406-410

(Note: DEBRISES\* is a phoney word.)

Getting rid of many of the consonants is a priority with only one vowel available. There is only one way to win this game, ZINCO (m11) for 32 points. This leaves DNR with NERD (i2) and DENAR (g11) available for an outplay. Unfortunately for Trevor he chooses ZIN (2a) for 30pts leaving the clunky CDNR. He doesn't leave himself with any outplay and Panupol simply can go out in two moves himself. Panupol has many out in two sequences, can you see any of them? Best is BIO (c12) then CURVED (a7). In the match Panupol chose VILE (h1) then RUC (15g).

If you can't find anywhere on the board to go out in two moves, you might consider using your first move to create a new place to play out with your second move. True, your opponent might block your new threat, but she might have to take many fewer points to do so or otherwise change her own endgame planning to respond. If you can't make life easy for yourself, might as well make it tough on your opponent!

Should you be on the other side of this tactic, as with every other endgame decision, the choice of whether to block or not comes down to calculating whichever resulting sequence gives you the most net points. If a seven-point blocking play leads to a sequence that gains you nine points on balance, but making a 30-point play elsewhere and allowing your opponent to go out gains you fifteen overall, then it's clearly best not to block.

If you can keep your opponent from going out in two, it's very important to find the best possible sequence available to your opponent, as illustrated by the example below:

This position from a game between David Webb and Nigel Richards at the European Open is an example of needing to block the opponent's best play with your play to edge the endgame. Nigel holds the unplayable FOLKIER. He is over 50 points behind in the endgame.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				H	O	G	G	E	T		O
2		D				E	U	O	I	3L		Q		2W	C
3		R	2W				2L		2L			U	2W		T
4	J	E	D	I				2L				I			A
5		A			2W					O	2W	N			P
6		M	U	R	V	A				E	W	E		3L	O
7			2L			N	O	N	A		A	S	2L		D
8	3W	B		2L			F	U	B		Z	2L	P	L	Y
9		I	2L				T	S	A	R	I	N	A		
10		N				3L				3L	R			3L	
11		I			H	E	A	L	E	E	S				
12	L	O	O	T	E	N		2L		X		2W			2L
13		U	2W				2L		G	A	M	E	D		
14		S				3L				C				2W	
15	3W			2L			W	R	I	T		2L			3W

**Nigel's rack: EFIKLOR**  
**Unseen: EITVY**  
**Score: 295-348**

There is no mathematical way that Nigel can win, unless his opponent errs on his next move. Nigel puts the pressure on David to find the best move. Nigel plays FIR (12l) leaving EKLO. This leaves LOKE (a7) for 44 points and KOEL (o12) for 55 points. LOKE doesn't score enough to win but KOEL does! David must block the latter and score decently, and YETI (14l, 27pts) is the only move that does the job. Unfortunately, David overlooks the threat and plays STIVY (14b, 19pts). From a losing position, Nigel plays KOEL and snatches victory from the jaws of defeat. This was a tough loss for David who had led by over 100 points for most of the game. Not only was this an example of needing to block the opponent's play, it shows that one should never give up in the endgame as Nigel didn't, even in 'lost' situations.

*Endgame Principle #3: Board vision is essential to playing endgames well.*

In the endgame, the board is full of tiles, and many of the good places to play have already been sealed off. You probably won't be relying on your bonus-finding ability now - most of the words played in endgames are the short ones most tournament players know well. But in a close game, every endgame point is magnified - for example, if you need to go out and score at least 10 to win, and you have DT left and only find TED for 8, overlooking an A and E one space apart in another part of the board where DATE would have fit for 12, you've lost a totally winnable game. So it pays to develop the habit of looking everywhere, even in the unlikely in-between spots. This is just as important when considering your opponent's possible plays - you can't block what you don't see.

## TAKING ADVANTAGE OF YOUR OPPONENT'S RACK

Since you know what letters your opponent holds, you know what your opponent can do - and moreover, what he can't. If his rack has a major flaw - all consonants, all vowels, ugly combos like IIU or CGV that make it hard to go out quickly - you may be able to exploit it.

One way to do this is to use one play of your endgame sequence to set up another that his tiles don't allow him to block. The next example features an innocuous-looking but elegant setup that nets a boatload of points. A nice setup can ensure victory and also extend the spread of a victory as seen in this match between Mikki Nicholson and Mark Nyman. Mikki holds AAFMNOZ and Mark holds the ugly DDLT. What can Mikki do to increase the margin of victory?

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W				3L				3L				2W	
3			2W				2L		2L	T		O	2W		
4	2L			2W				Q	U	E	E	R	D	O	M
5					L	W	E	I		C	2W	A			E
6		P	I	P	I	3L				H		G		3L	L
7			2L				2L		2L	I		I	2L		T
8	Y	A	C	K	A		J	E	T	E		O			I
9			2L		B	E	A	N	O	S		U	2L		N
10		F		G	O	V				3L		S		3L	G
11		U		O	V	E	R	U	S	E	D				
12	2L	R		Y	E	N		N		R	A	X			2L
13		R	A	I			2L	S	W	A	L	I	E	R	
14		2W	I	S		3L		E		3L				2W	
15	B	O	T	H	A	N		T				2L			3W

**Mikki's rack: AAFMNOZ**

**Unseen: DDLT**

**Score: 401-323**

The answer is EM (m13, 4pts). This sets up an unblockable ZONA/EMO (15l) for 74pts. The game is already won but spread has decided many a tournament and this great play generated a winning spread of 166 points in what had been a close game throughout.

As you can see from the position above, a small setup can lead to a huge score. It is almost never right to play one tile for four points, but every endgame is different and there's no rule of thumb to cover them all. This sort of creative thinking and flexibility is a hallmark of top-notch endgame play.

Another way you can exploit your opponent's troublesome rack is by making it so one or more of his tiles aren't playable anywhere on the board. Unwieldy high-point tiles like Q and V are most susceptible to this tactic, though as the next example shows, it's even possible at times with tiles you wouldn't expect.

This game between Jake Jacobs and Christian Brown features an example of the above. Look at the board position below. Jake has just played PROLAMIN to take a 31 point lead. Christian is sitting with the initially unpromising rack of EEEGITU whilst Jake is sitting with a single I. Christian plays ETUI, conceding defeat, not realising that Jake only has three places for his I which can all be blocked with one move. Can you see the best sequence to edge this endgame?

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
1	R	I	D	E			A	U	T	O		J			F	
2		F	E	T	C	H	E	S		P	O	I		Q	I	
3	P		W				2L		2L			V	2W	A	B	
4	R	O	S	I	E	R	E	2L			L	E	N	T	2L	
5	O	I			R					C	O	D	E	S		
6	L	3L			R	3L			M	A	X				3L	
7	A		2L		I		2L		2L	U		O	W	E		
8	M			2L	N		D	A	N	K	L	Y			3W	
9	I		2L		G		A	G	A				2L			
10	N	3L				3L	H	A	N	D	Y				3L	
11					2W							U	N		V	
12	2L				2W				2L			M	O	R	E	L
13			2W				2L		2L				B	E	T	A
14		2W					3L				3L			Z	O	S
15	3W				2L				3W				2L			T

**Christian's rack: EEEGITU**

**Unseen: I**

**Score: 377-408**

mEU or mEE (a8) must be played first to block potential outplays of AI, MI and IN. Jake can now only pass every remaining turn as his I is unplayable. After mEU, the best sequence for Christian is GIG (9c) for 12 points, TUG (c7) for 5 points, HER (f2) for 6 points then PROLAMINE (a3) for 10 points to reach a score of 412. Taking the I, the final score would have been 413-407. After mEE, the best sequence is TE (c7) for 3 points, GIG (9c) for 13 points, TEGU c9 for 5 points, and PROLAMINE (a3) for 10 points, making a final score of 411-407. For this reason, mEU is a slightly better play.

If you can manage to stick your opponent with an unplayable tile, it's often best to play out slowly, even one tile at a time, so as to maximise the points you gain from his predicament. You can also employ setups here at will, since your opponent's hands are tied. (Just be careful not to create a new spot for his unplayable tile by mistake!)

### THE PRE-ENDGAME

When there are about 15 tiles remaining in the bag, and particularly when there are seven or fewer (but at least one), we are in the pre-endgame. Like the endgame, the pre-endgame is often when the most crucial decisions are made. And if anything, the pre-endgame is more complex than the endgame, because we are moving more and more toward endgame thinking (seeing the game

from both sides, thinking strategically) while, unlike in the endgame, still dealing with probability as we have been doing all game long.

Now that the game's nearing its end, it's time to start thinking less about what is probable and more about what is possible. If you're ahead, ask yourself how you can possibly lose this game; if you're behind, ask how you can win it. For example, does your opponent need a late bonus to win? Then look to shut down promising bonus spots. Does your opponent need to score well with a big tile like X or Z to make it happen? Then take away hotspots or play more tiles to try to win the race to the tile your opponent needs. Is the tile pool unseen to you loaded with consonants? Look to take away vowels on the board she might use to balance her rack. Will you need a bonus yourself but don't yet have it? Keep a bonus-prone leave, or open up a new lane for bonuses, or try to play a longer word to increase the chances of getting that last blank...these questions and many others like them reflect the mindset for pre-endgame play. At no other point in the game do we juggle more different considerations.

One piece of information becomes vital to know in the pre-endgame: how many tiles remain in the bag. Either player is allowed to reach into the bag to count how many tiles remain, though as a point of etiquette you should say "just checking" and hold up your palm before and after, to show you are not putting back unwanted letters.

The pre-endgame leads directly into the endgame, at the point of the play that empties the bag. From the endgame section, you may have noticed that the player going first in the endgame has a distinct advantage. If he is the one to eventually play out, and more often than not he will be, he'll have had an extra turn the opponent did not. This means that if you're the one emptying the bag, your opponent will have that endgame advantage. (This advantage can be particularly nasty when your opponent then plays a bonus to go out. He gets the bonus score plus all the points from your rack, while you don't get another turn.)

The best way to make it so your opponent is the one emptying the bag and not you is to choose a play late in the pre-endgame that leaves just one tile in the bag. Your opponent will then be forced to either make a bag-emptying play or pass his turn and score nothing (and if he's behind, even that's not an option, since you can simply pass back and six passes end the game.). Leaving one tile in the bag is a classic tactic in Scrabble and there are hundreds of examples I could use to illustrate this. In the 2007 World Championship Final between Nigel Richards and Ganesh Asirvatham, leaving one tile in the bag assured eventual champion Nigel Richards of victory:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
1	3W		O	2L				3W				2L			W	
2		2W	V			3L				3L					Y	O
3			E				2L		2L		R			J	O	W
4	2L		R	2W	F	A		2L			B	E	G	A	N	2L
5			A		O	D					C	O	G			
6		3L	P		E	N					D	O			3L	
7			T	A	N	A	2L	B	2L	U	P			2L		
8	3W			Y		T	R	E	C	K	I	N	G		3W	
9			2L	U		I	2L	Z	2L	A	E			2L		
10		3L				O				3L	S	H	H	3L		
11					U	N	F	I	X		2W	M	E			
12	L	E	E	2W				V				M			2L	
13			E	Q	U	I	N	I	A	S				2W		
14		2W					3L	E		3L					2W	
15	3W			2L				D	I	R	T	I	E	S	T	

**Nigel's rack: AILORRT**  
**Unseen: ADEILLRSTU**  
**Score: 457-340**

Nigel holds AILORRT and a 117 point lead with three tiles in the bag. A comfortable lead on most occasions. With single point tiles and a huge deficit, Ganesh must go for the nine timer to win. The game is not safe for Nigel therefore as Ganesh has opened a second nine timer with LEE. However, Nigel plays the correct move, AR (6m) for 16 points. Ganesh then plays TAILLEUR (a8) for 122 points. Ganesh picks up the last tile and Nigel plays TOROIDS 28pts to win the match. Essential to Nigel winning this game is leaving one tile in the bag. Why? Let's imagine that Nigel had added a T to AR to make ART and empty the bag. Ganesh will play TAILLEUR and crucially will take all the points from Nigel's rack, an extra 16 points. ART would lose the match for Nigel. Instead, AR means that Nigel is allowed an extra turn to score which he duly does with TOROIDS. The other great attraction of only giving Ganesh one tile is that he is unlikely to score much thereafter with that one tile after his bonus. Note also that if Nigel had left two tiles in the bag, he would be leaving himself exposed to Ganesh playing one tile in the hope of getting a nine-timer and catching Nigel with his tiles. The AR move is very simple but not abiding by this important principle almost certainly would have lost Nigel the match.

Even before the bag gets to one tile, you need to think about how it might get there if it does. For example, if you leave three or four tiles in the bag, your opponent will very likely make a two- or three-tile play and leave the last tile for you. Two- or three-tile plays can score well, 30 or even more at times. If you leave two in the bag, your opponent must either play a single tile or empty the bag, and he may not be able to score very well at all with just one tile. Though on the other hand, leaving two tiles in the bag allows him the chance to fish off one tile if he's got a bonus-prone rack, so you'll have to consider all sides of the question before making your decision. This is true even earlier in the pre-endgame - for example, if you think your opponent is likely to play a bonus next turn, you're probably better off leaving seven in the bag instead of eight, causing his bonus to empty the bag and thus give you the first endgame move.

If you are faced with the last tile in the bag, it may be worth it to choose a play that plays off lots of tiles, to give yourself a bit of a head start in the endgame. For example, if you make a five-tile play with one in the bag, your next rack will have only three tiles on it while your opponent will have seven. You may then be able to go out first, even though your opponent goes first in the endgame.

## THE TILE POOL AND ENDGAME PREPARATION

Part of the pre-endgame is looking ahead to the endgame and ensuring as best you can that your final tiles will serve you well there. As you can see from the endgame section, it's much easier to play an endgame when you have a balance of vowels and consonants and don't have hard-to-play tiles like Cs, Qs and Vs or ugly combinations to fight through. Therefore, you need to pay close attention to the tiles that haven't been played. If there are tiles remaining that would help you in the endgame (or sooner), you may want to play more tiles and try to get at them, or conversely, if there are a lot of troublesome letters left you may want to play few tiles and let your opponent take the risk of drawing them instead. From the pool and your opponent's plays, it is often possible to make educated guesses about which tiles your opponent might have and which are still waiting in the bag, and the extra thought is very often worth the effort. It's at this point that you start to see the game from both sides, albeit imperfectly from your opponent's side.

With all this advice, however, remember that scoring points is still the name of the game, even late in the game. It's no good to have a nice endgame rack and great endgame skills if you've denied yourself forty points along the way to do so and now find yourself too far behind to pull the game out. As in every other part of a Scrabble game, there is a balance to be found between taking points and making lower-scoring moves that offer other advantages, and to find that balance there is simply no substitute for getting lots of game experience and honing your strategic thinking.

As you have seen, the endgame is the most complex aspect of a Scrabble game but practicing a few key principles will be extremely helpful. Players of all levels gain enormous satisfaction when post-game analysis reveals that they played an endgame perfectly, but even at expert level this is by no means every time. If you need to improve this area of your game (which nearly everyone does) we strongly recommend treating games where one player has a significant lead going into the endgame as if the scoreline was different and those final plays were actually going to decide the winner. By playing for every point in non-crucial situations you will gain the experience needed to handle the pressurised situations when they do arise... and who knows, you might even find that some of those "unwinnable" endgames aren't so unwinnable after all!



*Endgame co-author Geoff Thevenot relaxes after another nail-biting finish at the US National Championship*

# Entropy

Kenji Matsumoto

Player 1 starts out with an early lead. The struggle begins. Player 2 forges plans to make a comeback, while Player 1 holds their ground to protect their lead. Strategy changes. Player 1 acts more conservatively to inhibit Player 2 from scoring, while Player 2 take more risks seeking a risk-laden high-scoring contest. This situation is by no means unique to Scrabble: it's commonplace in many sports and games alike.

When behind, many Scrabble players try to create as many options as possible. This is the wrong approach. While you want to score, you don't want to create *\*so\** many opportunities that your opponent can easily maintain their lead. If the leader is scoring 35 points consistently, it becomes too difficult for the trailer to overcome a deficit.

To overtake your opponent, you want high scoring plays to be attainable, but medium scores to be scarce. You need high-scoring bonuses and/or huge JQXZ plays to cut into your opponent's lead, and you need to be willing to risk falling further behind to do so. Consistent, medium scoring plays aren't going to win: you want to maximise the odds that a big swing in score is about to occur.

Entropy measures the propensity for the score to drastically change, relative to the current score in the game. When you're behind, you want to maximise entropy, as you're looking for huge swings in score, while when you're ahead, you want to minimise entropy as you want the difference between your score and your opponent's score to remain stable.

Controlling entropy is vital if you want to succeed at Scrabble, particularly since in most games, one player will take a lead. In these games, the player who can control entropy will have a significant advantage, as it becomes a game of cat-and-mouse: the leader who is trying to manage risk, and the trailer who is trying to maximise variance.

## When to Affect Entropy

Before we get into how, it's most important to talk about *when* to affect entropy. Entropy is only important when one player has a substantial lead. If you're only ahead by 40 points at the beginning of the game, it's usually not a good idea to think too much about entropy, and it's rarely worth sacrificing more than a few points to affect entropy.

Sacrificing points and/or leave for entropy only makes sense if your play drastically affects either your rack or the board. If you're behind, you don't want to sacrifice too much to open a lane when there are already three more lanes available, or to increase your bonus percentage by just a few percent. You don't want to hunt for a JQXZ play unless you're likely to draw something that scores enough to make a significant dent in your opponent's lead.

Conversely, remember that your opponent will try to decrease entropy when you want to increase entropy (and vice-versa). Opening a big spot for the JXQZ when behind is often difficult since your opponent will usually block it (if not take it for themselves). High-scoring bonus lines will often result in your opponent simply blocking the line, if not using it themselves. To use concepts of entropy effectively, it's always important to think about what your opponent will do in response.

Finally, a word of caution: far too many players affect entropy for the wrong reasons: they like open boards, they fear their opponent's word knowledge, they haven't drawn well in recent games, they are curious to see what will happen, etc. These are all poor reasons to affect entropy. Entropy should be affected based on rational deduction: not based on personal tendencies or preferences.

## How to Affect Entropy

To affect entropy, one needs to approach Scrabble as two aspects: your rack (which is a private commodity) and the board (which is a public commodity).

When it comes to your rack, racks that increase entropy focus on bonuses and high scoring plays (plays that score 50+ points). This means racks that focus on bonus tiles (ADEILNRST) as well as racks that include and complement JXQZ are generally high entropy (if there are spots that can potentially score 50+ points), while leaves such as ACH or EKS are considered low entropy (as they consistently score 30-40 points).

Affecting the board is much more difficult, as your opponent will compete to alter the board and will typically have opposing goals depending on the score of the game. To maximize entropy, you want lots of bonuses available, but not as much scoring or flexibility. Low-scoring S-hooks and open letters without parallel options are considered good for entropy, while parallel plays with open TLS or DWS squares tend to decrease entropy. Here are some of the most important themes when it comes to affecting the board based on entropy:

### Increasing Entropy

1. Emphasise the possibility of bonuses, both by keeping bonus-heavy leaves and creating bonus lines: especially using TWS squares.
2. Create scoring spots that specifically focus on hitting JQXZ plays for 50+ points, especially if you are retaining them in your leave. 30 or even 40 points likely isn't going to cut it.
3. Minimise scoring options while emphasising bonus lanes, even if that means exhausting a certain region of the board. Bonus lines that open previously uncharted space will lead to a more volatile game.
4. Create separate bonus lines that don't intersect, as this will mean that even if one bonus line is taken, another bonus line will still remain.
5. Create hooks or bonus lines that are difficult to use and/or block. The entropy of an opening is dependent on its staying power.

### Decreasing Entropy

1. Emphasise high scoring opportunities by creating access to hotspots with medium point letters for consistent 35+ point plays. 70 point bonuses don't possess the same comeback potential if you can negate those plays simply by scoring well consistently.
2. Focus on minimising discrete bonus lines and keep potential bonuses in one specific area of the board, making it far less likely that multiple bonuses can erode your lead. If you have to let your opponent play a bonus, force them to play it in a location that allows you to continue to block the board easily on future turns.
3. Score points whenever possible even if it means making minor sacrifices in your leave. When you don't need a bonus to win, taking an extra 10 or 15 points to put yourself out of reach often means more than increasing your bonus percentage next turn.

## A High-Scoring Low Entropy Board

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				U				2L			3W
2		2W				3L		N		3L				2W	
3			2W				2L	I	2L				2W		
4	2L			2W				Q				2W			2L
5					2W		J	U	I	C	E				
6		3L				3L		E		O					3L
7			2L		W	A	B		2L	N			2L		
8	3W			B	E	T	I	D	E	S		2L			3W
9			2L				2L		2L	I			2L		
10		3L				3L				G					3L
11					R	E	M	A	I	N	E	D			
12	2L			2W				2L		S		2W			2L
13			2W				2L		2L				2W		
14		2W				3L				3L				2W	
15	3W			2L				3W				2L			3W

Coming back on a board like this is deceptively difficult because of the number of scoring options available, all of which will score decently but none of which will score enough to make a major dent in a 100+ point deficit. Good scores are available using either columns h or i in addition to rows 6 or 10, yet the left side of the board is fairly constricted for bonuses.

Overtaking a 100 point lead would likely require at least 3 bonuses, and even that might not be enough to win. Thus, this board has a medium to low entropy despite appearing to be extremely open: it's going to be fairly difficult for a big comeback to happen as the only good bonus lines are rows 1-3 (and those bonus lines aren't that great and will often be inhibited by column l plays).

## High Entropy Bonus Line

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W				3L				3L				2W	
3			2W				2L		2L				2W		
4	2L			B	R	O	O	K		W		2W			2L
5					2W			O	E	F					
6		3L				3L		I		I	O		V	3L	
7			2L				A	N	A	L	Y	T	I	C	
8	3W			Q	U	O	T	E	D		N	2L	R		3W
9			V	I	N	O	2L		2L		E		T	A	T
10		3L		n	I	P	p	I	E	R			U	P	O
11		B	U	S	T	S					2W	J	O	E	Y
12	2L			2W				2L				A	S		L
13			2W				2L		2L			M	O		A
14		2W				3L				3L				2W	N
15	3W			2L				3W				W	I	L	D

This is an example of a high entropy board, as there's one extremely valuable lane (column o) that's very difficult to block, but otherwise a very limited number of scoring options. New bonus lines can be created if you need to divert your opponent from blocking, and there are a few openings for scoring once in a while (the Z is valuable on this board as are h10 plays from the I) but for the most part it's likely that a lead could easily evaporate on a board like this. If the trailing player draws the S, they have a huge advantage likely to shift the game.

The S hook of ANALYTIC-S at o7 is a perfect example of a highly entropic spot: it's only usable for bonuses, but it's very difficult to block and can lead to huge scoring bonuses but can't really be used for a low-medium scoring play. If you're facing this type of opening with a lead, you want to hook EF-T or EF-F at 5l ASAP just to attempt to block this hook next turn.

## JQXZ scoring

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				A			3W
2		2W				3L				3L		I		2W	
3			2W				2L	C	2L			D	E		
4	2L			B	I	B		H			S	O	M		2L
5					N	O	M	A			T	I	E		
6		3L				P	U	R	G	E	R				3L
7			2L				2L	G	2L		a		2L		
8	3W			2L				e		U	N	W	I	S	E
9			2L				2L	R	2L		G		F	O	E
10						Z	O	I	S	I	T	E		F	Y
11		U	N	C	O						R				
12	2L			2W			2L					2W		2L	
13			2W				2L		2L				2W		
14		2W				3L				3L				2W	
15	3W			2L				3W				2L			3W

Rack: ACNNOTU

Score: 291-174

Last Play: EME m3 (24)

In this position there's only one bonus lane open, and you can't really use it other than making a play like TOUCAN 1h (24, completely killing the board). Instead, you can make a play like UNCO 11b, opening the U at b11 for a potentially huge scoring play if you draw the J (JUNTA b10 56) or Q (QUANT b10 68). Your opponent at this score is most likely to play at 1l to block the nine-timer and leave these threats open, especially after EME last turn which suggests they likely did not have either the Q or J on their previous turn.

While this is an effective way of creating an opening, most JQXZ openings and plays require these tiles already being on your rack and looking for draws that can lead to a high scoring play, or making a setup to maximise the potential of these high point tiles.

## Creating Discrete Lines

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W				3L				3L				2W	
3			2W				2L	C	2L				2W		
4	2L			2W				H			S	2W			2L
5					N	O	M	A			T				
6		3L				W	A	R	M	E	R				3L
7			2L				2L	G	2L		I		2L		
8	3W			2L				e			N	2L			3W
9			2L				2L	R	2L		G		2L		
10		3L			Z	O	I	S	I	T	E				3L
11					A	I	D				D				
12	2L			2W				2L					2W		2L
13			2W				2L		2L				2W		
14		2W				3L				3L				2W	
15	3W			2L				3W				2L			3W

**Rack: AACRRST**

**Score: 233-129**

In this position, there's only one good bonus lane available: the E at 8h to play along the left side of row 8. In this position you face a dilemma.

By far, the best bonus line you can create (and the hardest to block) would be by playing CAR at d4, creating a S-CAR hook. This limits scoring options and creates an S hook that is very difficult to block: two very important concepts of maximising entropy. However, it also opens a bonus line at column c: a column that intersects with row 8. As a result, your opponent can block both bonus lines simultaneously and put you in a really bad position with a play to the E in row 8 or using an S hook themselves. Although these plays wouldn't score much, they would leave you at a strong disadvantage.

Better plays might be easier to block, but don't intersect with that open A, leaving at least one bonus line open. A play such as CAR d11 (forming C-AID) or ARC l11 (forming D-A) are both significantly stronger plays, assuring that at least one open bonus lane remains available next turn.

## A Common Scrabble Position

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W				3L			3L					2W	
3			2W				2L		2L				2W		
4	2L			2W				2L				2W			2L
5					2W						2W				
6		3L				3L				3L					3L
7		G	2L				2L		2L				2L		
8	3W	A		2L			Q	A	T			2L			3W
9		R	2L				U	R	E				2L		
10		L				3L	A	T	E	3L					3L
11		A			2W		L	I	D			2W			
12	2L	N		2W			I	S				2W			2L
13		D	2W				A	T	2L			C	U	P	
14		S	T	U	F	F		R		M	A	T	I	N	G
15	3W			H	E	A	V	Y	S	E	T	2L			3W

**Rack: ADENRSV**  
**Score 1: 244-153**  
**Score 2: 137-264**

This is another good position to illustrate the concept of entropy. In this position, you have options along column 1 (VAN a6, VADE a6) as well as VANDA 8a (33) and VALIDER 11e (44). At score 1, you would definitely lean towards either VANDA or VALIDER as it extends your lead while preserving good scoring options. The 8b A is not as much of a concern (although Z plays are a problem, 45 point plays don't concern you TOO much as it just cancels out your current score. VANDA is also good as it limits the top right of the board and starts the process of blocking the top right, as the V is a bad bonus line, and once the D/A are blocked in VANDA the entire top left will also be blocked. Both of these plays drastically reduce entropy.

At score 2, you'd definitely want to take VAN or VADE. VAN a6 scores 27 and keeps a strong DERS leave as well as a good bonus line to open up the top left, which will in turn create more bonus lines while taking out that 8a hotspot, while significantly increasing your bonus chances over VADE. If you were further behind you might consider VADE, particularly since although it bonuses less often it's more likely to hit a huge high scoring play along column o, which would significantly alter the landscape of this game. Both of these are significantly better options when behind because of their increased entropy.

# How To Play AMAZING Scrabble

by Stewart Holden (editor)

Before we delve too deep into the strategies of Scrabble, it's extremely useful to provide a quick overview illustrating some basic points about the aspects and dynamics of Scrabble:

## **The KISS principle (Keep It Simple Stupid!)**

A game of Scrabble is a series of 10-15 individual puzzles, each of which has no connection to the puzzle immediately before or afterwards. In each case you are presented with a board and a rack of tiles and your objective is always the same - to find the best move in that particular position. Don't make the game into something more complicated than it is.

## **Scrabble is not chess. Scrabble is not poker.**

You don't need to think about what the opponent is plotting on every turn, this only becomes part of a Scrabble game near the end. Let them play their own game with their own rack, which will be largely unknown to you and largely impossible to guess with any accuracy. Your opponent is just doing exactly the same as you are, treating each position as a separate entity and trying to maximise score/rack leave with whatever tiles they have. You and your opponent are two individuals competing against your *own* abilities to find the best move from a given rack whilst using a shared board.

Even in competitive games played with a penalty for an incorrect challenge, bluffing plays a very small part of the game. "Trash talk" or gamesmanship are not part of competitive Scrabble and such activity, often called *coffeehousing*, is frowned upon. Don't moan about your tiles because it makes you look amateurish and, perhaps more importantly, even if your opponent is a good friend in "real life", he or she will only be secretly glad that you are struggling in your game against them. Respect your opponent and play your own game.

## **When you find a good move, look for a better one.**

It is far too easy to be excited by seeing a strong move from an otherwise difficult rack, perhaps a bonus play when you weren't expecting one or your opponent suddenly providing you with a 50pt "power tile" spot, only to realise after the move has been played that there was an even better play available elsewhere. The rush of blood to the head brought on by a "eureka moment" can lead you to make mistakes, so if you're about to play too quickly then sit on your hands (literally, if necessary!) and don't miss an obvious alternative that you'll kick yourself over later for not having seen.

## **Play the right move, not the pretty one.**

This point is self-explanatory but there is no denying that even hardened experts will sometimes be tempted by the once-in-a-lifetime opportunity to play a spectacular bonus when they know that a mundane alternative is strategically superior. It can be hard to settle for UNPAGED when you know that PYENGADU can be played for 10pts less elsewhere. Take pleasure in having spotted the possibility anyway, feel free to even make a note of it to mention out to your opponent when the game is finished... but then toughen up and abide by the golden rule: Play to win.

## **There is no luck in picking the best move.**

*"I don't believe in psychology. I believe in good moves."* – Bobby Fischer

Once your seven tiles have been picked from the bag (a random process) there is no more luck involved in a Scrabble turn; you are entirely responsible for what happens. Whether a rack is 'good' or "bad" does not affect to your ability to make a good choice of moves from whatever that rack happens to be. In fact, when your rack is "bad" and you have fewer candidate moves to choose from, finding the best one is usually easier.

### **You can't judge the move by the pickup.**

*"Play the best move; winning is a by-product" - Stefan Fatsis, Word Freak*

The best move is the best move regardless of which tiles you pick from the bag afterwards.

Imagine a situation in which one tile remains in the bag. The eight unseen tiles from your point of view are eight different letters, let's say ACENOPQW. Post-game analysis reveals that playing "Move A" in this position will win the game for you if the one tile in the bag turns out to be any of ACENO, but picking any of PQW will result in a loss. This move therefore has a 5/8 chance of winning. Alternatively, "Move B" will win the game for you if any of CPW are in the bag, but picking any of AENOQ loses and therefore Move B will only win 3/8 times. Move A is the correct move here regardless of what happens to be in the bag "in real life". It would be futile to argue that your choice of Move B was correct because it turned out that the W was in the bag and Move A would have lost on this occasion. None of us are psychic, we can only play the game with the information we have at the time. If you played the "winningest" move then you did the best you could have done.

### **If you are not willing to analyse your own play you will struggle to make progress.**

*"The only real mistake is the one from which we learn nothing." - John Powell*

In a game such as snooker or pool it is easy to reflect on missed shots or poor positional play and immediately know where one's weakness lies; a player cannot avoid knowing that if they had potted that particular ball or avoided carelessly sinking the cue-ball they would still be at the table and going on to win the frame. Likewise in football or hockey, the number of goals scored or conceded is a reasonable indication of whether the individual or team performed well or badly.

Scrabble provides no such feedback. It is remarkably easy to play a game and have no idea whether one has actually made the best of the opportunities presented. A few specific occurrences such as losing a turn through a phoney are obvious examples of poor play, but the luck factor involved in a single game of Scrabble means that you can walk away from a game thinking that because you won you must have played well or because you lost you must have played badly, when in fact the opposite may be true in either case.

Be brutally honest with yourself about your own strengths and weaknesses. If you are the kind of person who would rather not know about their mistakes (the "ignorance is bliss" principle), the truth is that you will never get far in any competitive activity. In every aspect of life we learn the most by analysing our mistakes. In Scrabble your real opponent is yourself rather than the person sitting opposite you, because with post-game analysis you will discover whether the choices you made were good or bad. You will be able to congratulate yourself when you found the best move and know you are learning when you identify the areas that require improvement. This takes courage and the abandonment of ego, but it is essential and ultimately very rewarding.

Nobody is going to point out the words you missed on every turn, but if you don't have the courage to find out for yourself then you will go nowhere slowly. However the good news is that even a small amount of self-analysis can yield noticeable results by helping you to make better choices.

What's more, the process of self-analysis is usually performed in the privacy of your own home with only yourself aware of the outcome, meaning the only obstacle is your own pride.

Later on in the book we will look in detail at the powerful pieces of software Zyzzyva and Quackle which are vital user-friendly tools for Scrabble improvement – and best of all, they are both free!

### **Learn from the best.**

Take every opportunity to play the best opponents you can find. Don't care about the result; care about how well you played and enjoy playing that game regardless of the score. Always be willing to learn, because a beginner who is keen to learn words and strategy will find they are respected by even the best players in the world (who were all once in that position themselves), whereas the old-timers who have no interest in improving and continue to make the same mistakes over thousands of games will never be of interest to anyone but themselves.

It can be difficult to find top-flight human opponents to play on a regular basis and even the most hardy of learners will occasionally need a break from relentless walloping by Quackle, but you do not always have to be playing in order to learn from the best. Over the past five years several websites have appeared which cover tournaments around the world as they happen, often with games to play through move-by-move. In particular we recommend:

**CrossTables** – [www.cross-tables.com](http://www.cross-tables.com) – outstanding website covering events in North America, with substantial database of expert games to play through in both TWL and Collins lexicons.

**CentreStar** – [www.centrestar.co.uk](http://www.centrestar.co.uk) – coverage of events in UK and Ireland

**Dweebovision** - <http://www.youtube.com/user/zapateo99> – UK Grandmaster David Webb's YouTube channel featuring videos of live ISC games with in-game commentary from expert players

In the cases of CrossTables and CentreStar, play through games by deciding what move you would make and then clicking the Forward button to see what the experts played. Many games have accompanying move lists generated by Quackle which will rate the players' moves (and your own) as you go along. As any expert will tell you, the process of learning never ends!

### **Find a mentor.**

*“Mentoring is a brain to pick, an ear to listen, and a push in the right direction.” - John C. Crosby*

Competitive Scrabble has not yet reached the level of popularity of other competitive activities, in which an unfortunate side effect is that experts become inaccessible to new players. In Scrabble, former World Champions and newcomers frequent the same internet forums and the game's finest gurus are invariably more than happy to offer advice and support to anyone showing a desire to improve their game. We are a relatively small and close-knit community of people who all want the competitive scene to thrive, and we all recognise that one of the best ways to learn is to ask for help from the best player you can find. Better still, ask someone to mentor your progress for a few months. If you show a genuine enthusiasm for improvement you will find a plethora of expert players who are more than willing to take you under their wing. It is doubtful whether many other competitive activities could claim to have more accessible world class players than those found in the Scrabble community, so don't be afraid to ask.

### **Don't count “goodies”.**

The usefulness of any of the 100 tiles in a Scrabble set is entirely dependent upon the board facing

you at that particular moment. There is a tendency amongst weaker players to overstate the importance of the two blanks and four S's which appear in each game and will use this as some kind of indicator of "who got better tiles". Although few would deny that blanks are powerful they are by no means decisive and having both at once is much less beneficial. Likewise the value of an S tile is hugely dependent on the available openings on the board and so simply counting who picks more of them, in the belief that this means anything, will only demonstrate that you have a poor understanding of Scrabble.

Even worse than this behaviour is the idea that the player who draws a high number of 'power tiles' JKQXZ is luckier than his or her opponent. The high-value tiles are double-edged swords; they will give an easy 50+ score on the right board but will just as often scupper a bonus-friendly rack leave, since if you have retained AENRT a pickup of JX is unlikely to be welcome. If you were told in advance of a game that you would pick all of JKQXZ in the same game, you should be more worried about your opponent getting the useful bonus material rather than thinking "Hooray, I'm going to get lots of good tiles". So don't keep track of "who got what", because you are better than that.

### **Don't fear your fear.**

Control your emotions and use them to your advantage. Games of Scrabble can be exciting, challenging and difficult and there is nothing wrong with feeling nervous tension when sitting down to play a face-to-face opponent in a situation where you want to prove yourself. As one of the world's greatest chess players, Garry Kasparov, wrote:

*"Emotion is a critical element of decision-making, not a sin always to be avoided. As with anything it is harmful in excess. You learn to focus it and control it the best you can. When I sat down at the board against my great rival, Anatoly Karpov, it was a special occasion. I knew it, he knew it, and we both knew the chess world was paying special attention. We had such a long and bitter history that it was impossible not to bring it to the board with us every time we played. On some occasions this anxiety created negative emotions like doubt. More often it generated greater creative tension, greater supplies of nervous tension, which is a chess player's lifeblood.*

*Usually when you are under stress there is a good reason for it. Learning not to get anxious about things beyond your control is a separate issue. So don't fight stress, use it! Channel that nervous energy into solving the problems. Sitting around worrying isn't going to achieve anything and the loss of time will often make the problem worse. Even in the worst case, mistakes of action teach you much more than inaction. Forward!"*



# Your First Tournament

(Note: This advice is adapted from the ABSP website and offers a friendly guide for those taking part in their first Scrabble tournament.)

So you've finally decided to take the plunge. Congratulations, and welcome to the world of tournament Scrabble! This is the beginning of a long wonderful journey that all of us have been lucky to embark upon: a journey that has allowed us to embrace this wonderful game while making a lifetime of friends and memories. I'm sure you have some questions, so let's get started!

Joining a tournament is easy. You don't need to belong to any club or association in order to play a Scrabble tournament: simply find details of the event on the website and follow the instructions for paying the entry fee. The organiser will advise you on everything else you need to know.

*"I was playing on the Internet Scrabble Club for a year before I entered my first tournament, and at one stage I thought I never would. I suffer from some anxiety and once told an ABSP member that I would never be able to play real-life tournaments. This changed as I grew in confidence, but I feel I may have entered a tournament much sooner had I actually known what to expect."*

## **Do I have to bring a Scrabble set?**

No. Although playing equipment is not provided by the organisers, most experienced players bring their own boards, tiles, racks etc. along with them. This means there is never a shortage of equipment to go around and so new players should not worry about bringing their own equipment.

The only thing you should bring is a pen and paper for recording the score. A variety of designs of printed Scrabble scoresheet can be found on many websites.

## **How do I know who to play?**

The name of your first opponent, which table you are playing on and who starts the game will appear shortly before the first round, usually on a printout which people gravitate towards when it is posted up on the wall. Who starts each game is normally determined by the program making the fixtures - it tries to ensure that everyone has an equal number of starts and replies in the event.

## **What do I need to know about playing with a timer?**

Your move is officially finished when you have pressed the button on your side of the timer and started your opponent's timer ticking. Until then, you can do anything you like - place a word on the board, announce the score, change your mind altogether, etc. until you announce the score for that move and then press your timer. This even applies if your opponent has prematurely said "Challenge" before you have ended your move by pressing your timer.

The usual time limits are 25 minutes for a player in which to complete all his/her moves. People who are not used to playing Scrabble with a timer sometimes have difficulty remembering to press it when they have finished their move; as Dave Koenig advises in the chapter on time management, play some friendly practice games before the day itself. If all of your time ticks away there is a penalty of 10 points for every extra minute or part of a minute used, but don't panic and play too quickly - you will find you have plenty of time as long as you remember to press your timer when you have made your move.

## **What if I want to exchange?**

If you wish to use your move to exchange tiles, place the tiles you are going to exchange face down on the table, announce "Change" and the number of tiles being exchanged, then press your clock to end your move. Take fresh tiles from the bag before putting the unwanted ones back in (otherwise you could end up getting the same tiles right back again!). There is no limit to the number of times a player can use their moves to exchange tiles, although there must always be at least seven tiles in the bag; after this point it is no longer possible to exchange.

### **How do I tell how many tiles are left in the bag?**

You are allowed to pick up the bag and feel it at any time to estimate how many tiles are left. If you wish to feel inside the bag to count the remaining tiles, then show your opponent an open hand, count them without too much disruption to your opponent, and show an empty hand afterwards.

### **How do I challenge moves?**

It is imperative that you are not afraid to challenge any words played by your opponent of which you are unsure. There have been cases in the past when new players have felt intimidated by their opponent's rating, "word knowledge" or apparent experience and so have not felt confident enough to check the validity of what is played against them. Players at all levels of the game play invalid words quite often; in games in which there is no penalty for making an unsuccessful challenge you are encouraged to check everything your opponent plays unless you are 100% sure of its validity.

To challenge a word, simply wait until your opponent has announced their score and pressed their timer. Say "Challenge" and press the button in the middle of the timer which neutralises both sides of the timer. In most tournaments the adjudication is done by computers located at various points in the playing room. You can challenge any number of words played by your opponent in the preceding move. Be aware that all challenges are adjudicated with one tick - the whole move is simply deemed either "valid" or "invalid", regardless of how many words have been challenged.

### **What's this about 'ratings'?**

You'll notice that most other people in your division have a rating listed next to their name, whereas you won't because this is your very first event. After every tournament the organiser will ensure the results are entered to the national rating system. Ratings are fun and a useful indication of your own performance, and ensure you are always put in a division with people near your own ability.

### **Anything else?**

It is important to arrive on time, and even more important to let the organiser know if you are going to be late. Most organisers will have provided you with an emergency contact number.

There will always be a Tournament Director (TD) at every event. If there is ever any problem or something you are unsure of then don't hesitate to neutralise the timer and call him/her over to help you out; everyone has queries from time to time, not just people at their first tournament. However, lousy letters are not a problem the Director will help you with!

### **Finally...**

Don't worry, relax and have fun. Most people find their first tournament an enjoyable experience - you might discover a few things you didn't realise and will perhaps feel a bit "new" at first, but most people go home having really enjoyed themselves and already looking forward to the next one.

Good luck!

# Playing Style

Andrew Fisher

Is there a 'best' playing style when it comes to Scrabble? There are certain hallmarks of highly successful players which should be emulated, but style is tied up to some extent with the player's personality: each player will consider the various factors that contribute to move selection, but will weight them differently before making a decision.

Scrabble is a game of warfare with hidden information (one's opponent's current resources, and the contents of the bag), but is unlike some other classic games such as chess – rather than representing one army arrayed against another, in Scrabble the playing pieces, once deployed on the board, belong equally to each player and can then be built on as desired. Hence it is not really possible to set up a rock-solid defensive formation for your own battle-line, as you might in chess, given that each player will end up working with much the same board formation as the game progresses. However, it is still possible to characterise a playing style as 'attacking' or 'defensive' in light of the player's propensity to open up floaters, leave hooks dangling and colonise TWS lanes, or conversely to block with parallel plays, choose unextendable words and prefer interlocking moves that minimise the opponent's opportunities. There is no doubt that the former style can often lead to higher scores and margins, but is vulnerable to counterattack; so given that the objective is solely to win the game, some prefer a more controlled approach in general. However, there are very few top players who are characterised as 'defensive', former US champion David Gibson being perhaps the most noted exponent.

Overriding score considerations will often make a single move the standout candidate, no matter what one's personal style may be. Scoring points is important, and quite often the highest-scoring move will be clearly best. This includes opening up the TWS lane, as in the following early-game position in which you trail 92 to 116 and hold EHKLOOW:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				P				2L			3W
2		2W				3L		R		3L				2W	
3			2W				2L	E	2L				2W		
4	2L			2W				S				2W			2L
5					M			U				2W			
6		3L			I	3L		M		3L					3L
7			2L		L		2L	E	2L				2L		
8	3W			V	I	O	L	D				2L			3W
9			2L		T		2L		2L				2L		
10		3L			A	3L				3L					3L
11					T							2W			
12	2L			2W	E			2L				2W			2L
13			2W				2L		2L				2W		
14		2W				3L				3L				2W	
15	3W			2L				3W				2L			3W

The obvious scoring zone is (d12)-(d15), and there are several candidates here: HOWK for 48 points is the most remunerative, with HOOK, HOLK and WELK also doing well. There are few viable plays that do not hit row 15, but highly defensive players might favour something like KEWL (d10, 40pts), or possibly colonisation of the (10e) hotspot with WO. One of the drawbacks of KEWL is the poor rack leave of HOO, while WO scores very weakly in comparison to HOWK – and on simulation, taking the points is clearly the best play. Sure, you might on rare occasions get hit with something like ROOKIEST for 158, but in truth that hardly ever happens. Most of the time your opponent will have his own rack problems to resolve, or may have other priorities – and you might even get to use the K yourself. One well-known rule of thumb is that it will generally be beneficial to open up the triple in this manner if you can score about six extra points over your next best alternative.

Here's another example in which simulation suggests that taking the points is the right course, notwithstanding the defensive implications. Imagine you have the rack AGIKOOT with scores about even:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W			G	2L			3W
2		2W				3L				Y	O			2W	
3			H	A	N	A	P		2L	I	N		2W		
4	2L			2W			E	C	O	T	O	U	R		2L
5					Z	A				I	F				
6		3L		Q	A	I	D			E				3L	
7	V		F	I	G		U	L	E	S			2L		
8	A			2L		U	N	I				2L			3W
9	W	H	A	L	E	R	S		J				2L		
10	T	3L				3L			O	3L				3L	
11	E				A	T	E	B	R	I	N				
12	D	R	A	W	L			2L				2W			2L
13			2W				2L		2L				2W		
14		2W				3L				3L				2W	
15	3W			2L				3W				2L			3W

**Rack: AGIKOOT**

There are some great overlap scores in row two with the K sitting at (2f), and TOKO, ATOK and TIKa all score a hefty 43pts, albeit giving some possible counterplay (you can distinguish between them by comparing their respective rack leaves, also bearing in mind that AKA, OKa and SKa will become available for access to the top row). As the next best score appears to be OKa (10i) for just 34, it is fairly obvious that you should take the points and not worry about what might happen in the top row.

Raw scoring power, then, will often override the desire to be defensive, and will highlight one play as clearly best. But as the game progresses, different considerations come into play, and it is quite often sensible to play slightly more conservatively when you will maintain or secure a strong lead. Consider the position below, holding EILMSS? with a ten-point lead:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W				3L				3L				2W	
3			2W				2L		2L					2W	
4	2L	C	L	A	N	G		2L					2W		2L
5				P	A	U	A					2W			
6		D	R	E	N	T				3L					3L
7			2L	E			W		2L					2L	
8	3W			K	R	A	A	L				2L			3W
9			2L				F		2L					2L	
10		3L				3L	T	E		3L					3L
11					2W			E				2W			
12	2L			2W				L					2W		2L
13			2W				2L	I	2L					2W	
14		2W				3L		E		3L				2W	
15	3W			2L				R				2L			3W

Rack: EILMSS?

This is actually a fairly good position for obscure bonus practice, but let's assume that your revision program has enabled you to identify all possibilities. The main ones in score order are:

15A SLIMSIER 86  
 I8 SELFISM 83  
 14G BESMILES 80  
 15H REALISMS 80  
 15H REMISSLY 80  
 15H RIMELESS 80  
 11B MEJLISES 79  
 13G SIMILISE 76

Don't worry if you didn't see these – we're talking theory at this stage. Here the highest-scoring bonus SLIMSIER is very strong, but is rather open and gives good prospects for a comeback (e.g. a bonus onto the open S at (15a), which happened later in the actual game with the opponent's unwelcome GJETOSTS). Knowing that you will shoot into a lead of almost 100, it is probably wisest to sacrifice a small number of points by choosing the tighter SELFISM (i8), with its spectacular six hooks: the parallel play and killing of floaters makes it much more likely that your opponent will have trouble in pulling back.

By contrast, the next position in the same game neatly illustrates the mindset you should adopt when in arrears, holding a rack of DDEEINT:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W				3L				3L				2W	
3			2W				2L		2L				2W		
4	2L	C	L	A	N	G		2L				2W			2L
5				P	A	U	A				2W				
6		D	R	E	N	T				3L				3L	
7			2L	E			W		2L				2L		
8	3W			K	R	A	A	L				2L			3W
9			2L				F		2L				2L		
10		3L				3L	T	E		3L				3L	
11					2W			E			2W				
12	2L			2W				L				2W			2L
13			2W				2L	I	2L				2W		
14		2W				3L		E		3L				2W	
15	S	L	I	M	S	I	E	R				2L			3W

Rack: DDEEINT

The bonuses available are:

13H INEDITED 72  
 12C DENTILED 70  
 13D INEDITED 63

Noting firstly that no bonus would have been possible if SELFISM had been found on the previous turn, we take stock of the scores which indicate arrears of 96pts. That is virtually worth a bonus and a half, meaning that we need more volatility rather than a tight, controlled position. This makes it clear that the best play is to open things up, providing several new floaters and maximising the score – INEDITED (13h) is the choice, making it much harder for the opponent to lock down the board.

So the current score and stage of the game are of vital importance in deciding whether to play slightly more defensively or slightly more aggressively. In general it makes sense to play defensively when ahead, and go for volatility when in arrears, but again each player will have different preferences and judgements about this. My personal leaning is to take calculated risks on fairly open boards, and sadly this strategy sometimes backfires.

Be aware that if the state of the board itself is already very volatile, there is less potential damage caused by creating yet another opening. Your opponent might find it better to colonise an existing hotspot, and indeed making more openings available might guarantee that you still have places to score after the opponent takes a turn. Conversely, if the board is pretty blocked and not susceptible to counterplay, creating a glaring hotspot can be much more risky. This is when discretion may be the better part of valour.

Top players are always trying to give themselves a small edge. The most obvious way lies in tripping up your opponent with obscure hooks, for example a play of PAREV might entice them into subsequently attaching an S which would lead to a loss of turn (PAREV is derived from a Yiddish word meaning 'neutral', i.e. cooked without milk or meat). Then you can deflate them by adding the E to make PAREVE. This mindset also encourages setup plays to benefit your own rack leave, and here are a couple of examples:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W				3L				3L				2W	
3			2W				2L		2L					2W	
4	2L			2W				2L				2W			2L
5					2W				V		2W				
6		3L				3L			A	3L				3L	
7		W	H	E	Y		2L		V				2L		
8	K	I		X	E	N	I	A	S			2L			3W
9	A	Z	I	O	N	E	S		2L				2L		
10		3L				P	H	O	N	3L				3L	
11					2W			B	O	E	P				
12	2L			2W				2L				2W			2L
13			2W				2L		2L				2W		
14		2W				3L				3L				2W	
15	3W			2L				3W				2L			3W

Your rack: EILNORZ

All the good plays triple the Z somehow in row 6. The point in choosing AZO (6i), as selected in this position by David Eldar in his game against Naweem Fernando, is to give a slight edge by setting up the N remaining on your rack for AZON. It's hard to argue with, especially with three N's already on the board. The only fly in the ointment is the creation of another hotspot for something like a J (see below for a continuation).

For a more restrictive setup opportunity, have a look at this position. You hold BEEILOO with scores roughly equal, your opponent having just played UNBAN:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O		
1	3W			2L				3W				2L			3W		
2		2W				3L				3L				2W			
3			2W				2L		2L					2W			
4	2L			2W				2L					2W		2L		
5					2W							2W					
6		3L					3L				3L				3L		
7		G	L	A	N	D	E	S	2L					2L			
8	3W				G	U	I	R	O				U	N	B	A	N
9			2L				M	A	L	I	C	H	O	2L			
10		3L						3L				3L				3L	
11						2W							2W				
12	2L			2W					2L					2W		2L	
13			2W					2L		2L				2W			
14		2W					3L					3L			2W		
15	3W			2L					3W				2L			3W	

Your rack: BEEILOO

Here LOOIE/DIME (10b) seems best, setting up the BLOOIE hook. The opponent has just used the other B, and the other hook (F-LOOIE) is not particularly likely. Thus the play clears your rack of surplus vowels, with the side benefit of creating a virtually one-way hook in your favour.

How about bluffing or feinting? Let's return to the Eldar/Fernando game. Here, Fernando holds BCDDMTT and is 251-270 behind:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W				3L				3L				2W	
3			2W				2L		2L				2W		
4	2L			2W				2L				2W			2L
5					2W				V		J	A	I		
6		3L				3L			A	Z	O				3L
7		W	H	E	Y		2L		V				2L		
8	K	I		X	E	N	I	A	S			2L			3W
9	A	Z	I	O	N	E	S		2L				2L		
10		3L				P	H	O	N	3L					3L
11					2W			B	O	E	P				
12	T	E	G	U			A	I	R	L	I	N	E		2L
13		R	I	M	A	Y	E	S	2L				2W		
14		2W				3L				3L				2W	
15	3W			2L				3W				2L			3W

**Your rack: BCDDMTT**

There are hardly any reasonable plays available. It's either DEBT (m11) or exchange, and here the bold decision is made to plump for the 14-point DBT dump. At least CDMT has the makings of an acceptable rack, and DEBT turns out to be the only play with (just barely) positive equity according to Quackle. While Fernando may be opening the triple lane without keeping the relevant hook letter, at least there were other hook possibilities on the board already.

That gambit may be termed a bluff (and incidentally, Fernando later drew the much-needed S and pulled back with MULCTS/DEBTS), but it is also possible to feint, luring your opponent into an incorrect quadrant to address a phantom threat.

Let's say you hold the tricky DNPRTWZ in the following position:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
1	3W			2L				3W				L	O	O	F	?
2		2W				3L				3L	Q	U	I	D		AAA
3			2W				2L		2L	V		C		2W		B
4	2L			2W				2L		E	R	K			2L	EEEE
5					2W					X	I	S				G
6		3L				3L				A	A				3L	H
7			2L			J	2L	M	2L	T				2L		LL
8	3W			2L		A	B	A	C	I		R	A	U	N	M
9			2L			R	2L	P	H	O	N	E	Y			N
10		3L			L	O				N					3L	O
11			E	R	O	S	I	O	N	S		2W				S
12	2L		E	2W	G	I			2L				2W		2L	TT
13			R		I	T	2L		2L					2W		UU
14	F	E	I	G	N	E	D			3L					2W	V
15	3W		E	2L			I	O	D	A	T	E			3W	W
																Y

**Your rack: DNPRTWZ**

One way to score some points is with the single-tile dump, ZA (j14, 31pts). But considering the unseen pool of 25 letters, which includes four A's, four E's, an I and a blank, it might be worth hoping for a higher score with something like a parallel ZA, ZED or ZIP in that location next turn, netting 60+ with the overlap.

Thus you might choose to distract your opponent with the 24-point TWP/PEERIE (10a), placing an inviting floater in the triple lane (but with no prospect of a nine-timer). This is likely to divert them to playing in the A column, whereas your focus is really on the (j14) hotspot – and if the planets are aligned, you might even draw just the right tiles to play ZANTE for 103! In any event you have about a 75% chance of drawing a usable tile after TWP.

More subtle combinations of bluffing and feinting have also been spotted in the wild, e.g. making an apparent setup for a huge X-play when the player doesn't even possess that tile (hoping either to draw it, or to distract attention from another board sector that would remain usable as a follow-up). This sort of thing is highly risky, given that the opponent might well be sitting on the X already, but 1% shots sometimes pay off.

The best players have numerous weapons in their armoury including the above tactics, and the propensity to use one or the other will form a part of their individual strategic style.

David Sirlin's useful book *Playing To Win* covers playing style extensively, and although the focus there is biased towards Warcraft and computer gaming, it's still well worth a read. He devotes a chapter to what he calls *yomi* (not valid in Scrabble); a Japanese term implying foreknowledge of your opponent's intentions. The most rational strategic thinker in the world will come off second best to somebody with abundant *yomi*, somebody who seems able to thwart the opponent's best moves effortlessly at every turn. This supernatural ability to know the optimal course in specific

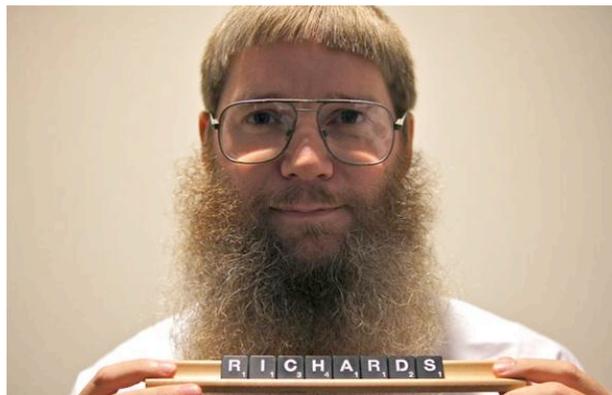
situations, even where it runs counter to computer simulation, improves with experience and observation. But like most instinctual patterns, it cannot really be taught, and some are better-endowed than others. You will sometimes be faced with endgame positions in which your opponent could have two possible winning bonuses in different board sectors, and in the absence of any inferences you have to summon your yomi power to know which way to jump.

You might sometimes feel that your opponent's *yomi* extends to influencing the order in which tiles come out of the bag, but I would call that paranoia.

Sirlin also discusses concepts such as continuous self-improvement; adaptability; discipline; presence of mind; forging your abilities in the heat of live tournaments; identifying the critical point of a game and seizing the advantage; and learning the ability to treat every move as a puzzle with an optimal solution, regardless of the circumstances.

An excellent example of differing playing styles occurred in the [final round of the 2012 US Nationals](#). Online forums were soon abuzz with discussion of Game 31, and here is Geoff Thevenot setting the scene to explain why:

“Nigel Richards, of Malaysia and New Zealand, the best Scrabble player in the world, period, and winner of two of the last three Worlds and three of the last four U.S. Nationals, was pitted in the final game against David Gibson, of South Carolina, one of the best players in the world in his own right and a former national champion. Gibson was a game ahead and had the point spread advantage as well, which meant that Nigel had to win the final game by 170 or more to claim the title. The odds of beating David Gibson by 170 in any game, for anyone, are quite long. Not only that, Gibson has a reputation of being very, very skilled at the defensive aspects of the game. And Gibson, now about 60, has been a top player for 25 years and, like Nigel, has ice in his veins and isn't rattled by even the most intense pressure the game has to offer. If you wanted to pick one player in the world to defend a 170-point lead against Nigel Richards in a game played in TWL (the smaller US Scrabble word authority) Gibson would be your man.



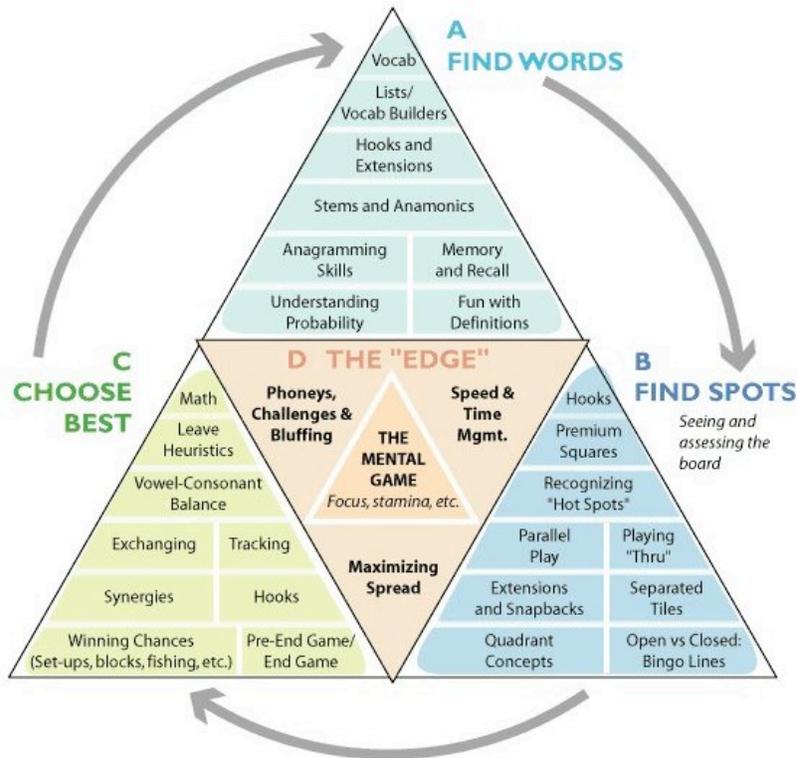
You guessed it - Nigel won by 177. Unbelievable. Gibson did play quite poorly by his own standards - he missed a crucial bonus, not being sure enough of its validity to put it on the board in that situation, and made other moves that most of us agreed were questionable. Scrabble is hard, and humbling; even the very best of the best can have a game like that. So that makes an unprecedented four U.S. Nationals wins for Nigel, despite the fact that his "native" word list is CSW and he has to know which of its words NOT to play in order to compete in TWL. Astonishing.”

The extraordinary thing is that even towards the end of the game, Gibson had a chance of winning the tournament by restricting his losing spread to a mere 168 (instead of LOSEL on move 13 he

could have played the amazing two-point setup OUT at G2, burning the blank but leaving an outplay of LEARN/ROUT). The whole game is well worth playing through and analysing in depth – try and work out for yourself why, for instance, Richards chose TALE on move 11. When this particular choice was criticised in a blog comment, a telling response came from top US player Dave Koenig:

“It rings hollow to talk about Nigel's weakness when he's the best player in the world. Nigel's style is to keep the board as dynamic as possible and bludgeon the hell out of you with superior word knowledge, anagramming ability, and play-finding skills. It's a flat-out better way of playing than obsessing about strategy. And that fact should be obvious by the fact that he has consistently better results than guys who do. I am oversimplifying a bit. Nigel has a great knack for visualising and creating setup possibilities.”

There you have it – the playing style of the world’s best player in a nutshell. Develop your own style by becoming aware of the factors that might influence your decision, and weigh these factors up for yourself in deciding how to play.



John Van Pelt's *Verbamap* diagram is an attempt at representing the many factors which affect every move in a game of Scrabble.

# The Luck Element

Ed Martin

Scrabble has a luck element. Get over it! It evens out over time. The best thing any player can do is stop thinking about luck and starting thinking about the things they can do something about. At its core, Scrabble is a relatively simple game. To succeed, you need to know a lot of words; you then need to spot moves over the board; you then need to evaluate them, with reference to score, rack leave and (to a lesser degree) the board position.

Yet many players devote disproportionate amounts of time to considering the random order in which the letters come out of the bag – to the detriment of other, more productive disciplines. The best players achieve a certain detachment from considerations of luck. I recall an occasion from early in my Scrabble career in the early 1990s, as a teenager playing a top player of the time. I played a bonus containing two blanks, and looked up at my opponent hoping to see a flicker of disappointment. He coolly scored and tile tracked the play and carried on with the game. He later remarked that he was always pleased to see an opponent's bonus play containing both blanks as he would much prefer that they replenish their rack from a bag containing no blanks than two. Yet the reaction of most players is disappointment that their opponent has picked the blank tiles, and not them.

There are no shortcuts to success at Scrabble: learn the words, find the best moves, and pick the best one. Do this over and over again. Forget the order in which the letters come out of the bag. It doesn't matter. This isn't easy and involves taking a more rational and less emotional approach to the game – something that can only come with practice. Learning to detach yourself from the vagaries of luck in the short term means going against your natural reactions. For someone who has devoted a lot of time to studying, they will want some return on their investment, in the form of good results. If that isn't forthcoming, for reasons they perceive to be beyond their control, they will get upset – but this reinforces the problem, because they will be in a frame of mind where they will be less likely to find and select the best play in the first place. The only solution is to practise. Tell yourself the order the letters appear doesn't matter. When you see your opponent playing two blanks and you are pleased, you're doing better than most players!



*Turn your thinking upside-down*

# Annotated Game: David Eldar vs. Nigel Richards

Edward Okulicz

This game took place at the 2017 MSI World Championships, in the knock-out quarterfinal stages. Nigel Richards is generally considered the world's best player, combining a photographic memory with an uncanny ability to find the best play move after move, frequently confusing other experts in doing so. David Eldar was a top player by the age of 15 and also has an intimidating word knowledge, and is one of the game's sharpest strategists. Going into this tournament, he was regarded as the best player to never win a World Championship.

**DE1: BEENQRR                      change BEQR                      0                      0**



**NR1: ADIIL0?                      H6                      sIALOID                      64                      64**

Since you can't avoid placing a vowel next to a DLS, it's best to play at H6 for the extra 2 points. There's a received wisdom that you should avoid making the blank an S or other desirable letter to play through or onto, so many players would prefer the other bonus (LIAnOID). But an N is not a bad floater, and the blank S isn't going in a dangerous spot - on the centre star, or in the double-double alley, so it's not much of a difference. The best players will find a word just as easily through an N as an S. Quackle rates the plays as within a point of each other with sIALOID ahead.

**DE2: AELNORS                      11D                      ALERIONS                      82                      82**



**NR2: AEIKMOZ                      G6    OKA                                      26    94**

The Z can be cashed in immediately with plays at 12A like KAZI or ZOE A, but placing the Z in the triple file or above a DWS permitting a huge overlap gives away some of the advantage from the extra points. OKA permits a play of MIZ next turn for 65, and is not such an obvious set up that the opponent will necessarily block it. It could be the right play from many racks that don't contain the Z. It's such a good setup that the next best play is OKE in the same position - better to keep an E than an A though.

**DE3: BDEGTV?                      F10    VEG                                      15    97**

A welcome draw of a blank, albeit with five consonants that don't gel together well at all. B, D and T are not necessarily harmonious, but with the blank and E permitting BE-, -ED and -TED words, or -ATED with the floating A of ALERIONS, in this situation they complement each other. The other plausible options are using the A with VAG with the same leave, or BEGAD (keeping TV?) or BEGAT (DV?). The extra two points of BEGAD make it superior to BEGAT, and VAG, BEGAD and VEG are all, again, within a point of each other.

**NR3: EEEIIMZ                      F4    MIZ                                      65    159**

The EEEI leave is diabolical, but when you're scoring 65 points, you take it. A consonant heavy pickup could easily save this rack quickly, because it's a lot better to have doubled Es than other vowels.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3W			2L				3W				2L			3W
2		2W				3L				3L					2W
3			2W				2L		2L					2W	
4	2L			2W		M		2L					2W		2L
5					2W	I						2W			
6		3L				Z	O	S		3L					3L
7			2L				K	I	2L					2L	
8	3W			2L			A	A					2L		3W
9			2L				2L	L	2L					2L	
10		3L				V		O		3L					3L
11				A	L	E	R	I	O	N	S				
12	2L			2W		G		D					2W		2L
13			2W				2L		2L					2W	
14		2W					3L				3L				2W
15	3W			2L				3W					2L		3W

B	D	E	F	H	T
3	2	1	4	4	1

**DE4: BDEFHT?                      D9    HAFTED                      30    127**

The theme of David's plays so far is that he has a lot of good choices very close to each other. 12A BETH and D10 HAFTED are close. Simulation gives the edge to HAFTED - both plays score reasonably and spend some of the better letters to get rid of part of the clunky BHF mix. DF? isn't a terrific leave and isn't likely to gel with the floating B in the triple file that BETH creates. HAFTED also opens a minor bonus line for a word ending in a vowel or S.

**NR4: EEEEEINS                      C12    EINE    22    191**

The fourth E is unwelcome, but Nigel has drawn two consonants that are good at absorbing surplus vowels and is able to offload two of them keeping an agreeable EES and making it less straightforward to get a triple-triple. DIENE uses the same letters, but it creates a potentially lucrative hotspot from 14B-14F that Nigel is unlikely to get to use himself. An aggressive alternative is to just dump EE at C12 and hope to get the triple-triple himself. Quackle rates the two close; Nigel will play bonuses more often with a leave of EEINS, but will concede big plays to David more often.

**DE5: BBJLNV?                      change BBJLV                                      0    127**

Best. Beginner players can feel tempted to hold on to a high point tile for the possibility of easy points, but the board isn't J-friendly, and the J is a weak tile for bonuses. N is a better consonant than L in almost any circumstance - perhaps a case could be made for an L if it was permitting something like an -ABLE word, but that's not a likely proposition here.



**NR5: EEEEHSU                    4E    EMEU                    7    188**

Nigel again draws two Es. EMEU is the only reasonable candidate that plays three vowels. HEME keeping EESU is not bad, but it could give away a decent score on the TWS at H1, and SH is a fantastic pairing. Then there's the possibility of a play like HEEDLESS, HEEDIEST, or one of 7 SHED- words through ED. EMEU wins. Many such plays involving that easy-to-miss spot include -EED- in the middle. Simulation shows that after a few more moves, EMEU is the move least likely to relinquish the lead.



**DE6: ENOORT?                    3G    ENROOTs                    71    198**

The other bonus in that position is NORTEnO. It does create a powerful hot-spot for a heavy consonant, not least the J. But Nigel isn't likely to have the J as he's only played 3 tiles since David exchanged it, so this lowers the immediate risk. Simulation can't split the two moves, but Nigel's previous move indicates too many vowels and likely lots of Es, and is less likely than average to have a high scoring overlap. With that inference, I rate ENROOTs as the better play, and a strong, counterintuitive choice here.

**NR6: ABEEHIS                    2J    BHAIS                                    50    238**

In unlikely fashion, Nigel gets a higher-scoring response than David might have expected, at the expense of an S. His play does open the top row up for possible big counterplays though, for instance, QAID would fit at 1L for 98 points. The S has less value than usual on this board because there are no exclusive hooks, nor is Nigel holding the last one, so it's not worth just playing BHAI or another word retaining it.

**DE7: CEGGLOS                    2A    COGGLES                    79    277**

The only bonus, and it also plays for 10 fewer points at C4. 10 points is more than enough to compensate for what is a fairly difficult to use TWS - the C prevents any overlaps. If it were an E or an R in that position, you might think twice, but not for the more awkward C.

**NR7: ACEEOUW                    4J    OWE                                        30    268**

Separating the W and U, and playing more vowels than consonants, are both imperative. The top moves are all played at 4J - OWE/WOE (keeping ACEU) or AWE/WAE (keeping CEOU). With 4 As to come and only one other O, I would give the edge to AWE, but AU is a slightly better blend if the Q turns up. Again, simulation puts the two moves very close.



**DE8: AAMRTWY                    1L    TWAY                    45    322**

No spot for TRAMWAY. Three moves stand out from the pack - David's TWAY, B10 YARTA, forming TEF/TIT/ANE for 47, and A2 CARTWAY. Each play retains an M - YARTA also keeps an W, creating an unhelpful blend while playing in the very spot they would be most likely to be unloaded in the future. The extra AR in the leave helps TWAY a bit. but the clincher for TWAY is that the L1 hot spot is just so much more dangerous than the triple file at this time. There are some good letters to come but also a lot of potential nasties. It's better to play short here - TWAY makes up the 3 extra points of CARTWAY and then some.

**NR8: ACEILUR                    C4    AURICLE                                    66    332**

An unlikely draw of a bonus, and none of David's candidate plays from last turn would have stopped it.

**DE9: AAIMRX                    B9    AMIR                    34    356**

The X can't be played for a big score without risk. B13 RAX would risk a tile-dump forming AXED or EXED for a huge score, though it's entirely possible that with 26 unseen letters and only one A and two Es remaining that he won't have one. That risk is nearly impossible to calculate in game. AMIR is safer and scores nearly as well and doesn't have that level of risk. It is a reasonable, safe choice, and retains B14 AX for next turn.

**NR9: ABDEOTT                    A4    BOTTED                                    40    372**

While you shouldn't evaluate a move based only on what your opponent does in response, it's worth noting that this is exactly the sort of rack that would have benefited from David playing RAX last turn. Nigel has scored well but he's also broken up plenty of synergy here, which he wouldn't have had to do otherwise.



**DE10 ADINPX**                      **12K IXNAY**                      **40 396**

The nearest thing to an error you'll find in this game - Quackle rates this as the likely winner in slightly more than a third of simulations, compared to close to 53% for simply dropping the X at 5E. Nigel's rack is likely to be close to random here.



**NR: AJNPSUU**                      **O12 YUP**                      **8 384**

Clever play, taking advantage of the last S in a way that wouldn't have been available if not for IXNAY. N10 JAAPS scores a lot more - 60 vs 8, but with the last S, Nigel is guaranteed to score at least 57 points for JUS/YUPS next turn, or even more if he draws the I for JINS/YUPS, or for David to have to alter his plans to block it. Quackle rates YUP as 6% more likely to win than JAAPS - close to 91% compared to 85%. Towards the end of the game, every percentage point counts. To look at it the other way, YUP loses 9% of the time, and JAAPS loses 15% of the time. Seen in that light, the decision is even clearer.



DE11: DEFPRIT

K2 HOWF

26 422

A straight simulation suggests playing an FR- word from K5 like FRIED or FRIT, or even 5I ERF. But In order for YUP to be the right play, Nigel must be holding the S, and something big enough to make it worth giving up the lead temporarily. The unseen letters are AJNNQRSUV. With the Q so dangerous, Nigel would be unlikely to have played YUP if he didn't have the other U (though it's worth noting that YAP takes a P hook to form YAPP, and the other P is unseen). So it's likely that Nigel has kept JSU, and he's also all but certain to have an N. Had Nigel held the Q, N10 QUA might have been a possibility, so it is more likely than not to still have been in the bag prior to that turn, and Nigel only played two tiles. David picks a move which halves the chances of picking the Q, and ensures Nigel is forced to empty the bag and will struggle with some unhelpful combinations no matter what.

If you infer some of these tiles before simulating, the top moves all involve dropping one tile - the F - on the board. HOWF is the highest scoring play that does this. This is a superb bit of thinking from David.

To work out why this is the best move, you have to think about the pickups.. Picking the A allows the straightforward bonus of DIPTERAN onto the N of IXNAY, but also the non-bonus triple-triple of PREDATED for 108.

Picking one of the two Ns would give David DIPTERAN again, this time through the A. Picking the R allows PREDRIED, also for 108.



# Scrabble Info and Resources

So you want to play tournament Scrabble? Awesome! To get you started, we've compiled some of the most popular resources within our community. These resources are considered essential for most players, allowing players to connect with like-minded players as well as help you improve your game.

To begin, here are a list of the different type of resources we'll discuss:

**Scrabble Programs:** These are the study programs and tools used by the best players in the world that can help you to learn words and evaluate your play. These programs are essential for anyone who wants to improve their Scrabble game!

**Scrabble Websites:** These are the websites that provide you tips and advice about how to play Scrabble as well as places to play Scrabble against other players at any level!

**Scrabble Books:** These are the books that can allow you to experience the most out of the Scrabble world, whether you're interested in the Scrabble subculture, words, or strategy. Many of the authors have spent many hours editing and crafting these books to create the best experience possible for their readers. Check it out!

**Scrabble Equipment:** Whether it's board, tiles, or clocks, this will tell you where to get the Scrabble equipment you need. Exhibit your Scrabble pride by playing on the best Scrabble equipment!

**Scrabble Apps:** These apps allow you to engage in Scrabble on the go, regardless of the type of phone you're using.

**Scrabble Around the World:** This gives you organization about the various organizations of tournament Scrabble and youth Scrabble around the world. Get involved and celebrate the game of Scrabble, regardless of age, race, religion, or geography!

**Glossary:** an overview of every term that you might here within the context of tournament Scrabble.

Using these resources, anyone can learn to enjoy and excel at Scrabble, turning themselves from a Scrabble neophyte into a Scrabble expert!

# Scrabble Programs

These are the programs that have changed Scrabble together: programs that help us learn words and enhance our strategy. Using these programs, you can teach yourself: and in the process, build your game to new heights!

## Quackle

Toh Weibin

Quackle (<http://www.quackle.org>) is a word game artificial intelligence programme used by most expert Scrabble players to evaluate their games. As a player, it is important to understand Quackle's usefulness in analysing one's gameplay, and at the same time acknowledge its notable weaknesses, most of which stem from its nonhuman nature. Familiarity with the software will allow you to understand the game much better from a mathematical perspective and improve your decision-making abilities.

Quackle



### Starting up – some brief instructions

To begin, download the latest version of the programme from the website. The very first step is to configure the board to mirror a Scrabble board. This can be done by going to the “Settings” tab and clicking “Add Board”, followed by left or right-clicking the squares on the board until they reflect the corresponding colour on a Scrabble board. Once that is done, select CSW15 as the lexicon. You are now ready to start your first game.

Starting a new game can be done by clicking “New game” and then selecting and naming the players. There are currently 6 types of players available for selection; for the sake of brevity only four are included in this discussion – Human, Human With Unknown Racks, Speedy Player and Championship Player. The first two are, as their names suggest, human players; the latter being introduced to ease keying in moves played by an opponent with unknown racks, as there is no need to corroborate the player's rack before keying in his move on the board. For regular games against Quackle, use the Human option for yourself.

The Speedy Player is the fastest computer player on offer as it makes its move instantly. Its analysis comprises a static evaluation, meaning that it doesn't perform any kind of 'simulation' of the position (more on this later). In the majority of positions it makes decisions here based purely on score and rack leave, the only exceptions being the first move and the pre-endgame. As this is purely a matter of comparing scores and leave values, the Speedy Player often plays without regard for position, sometimes opening triple lanes dangerously and making foolish pre-endgame plays:

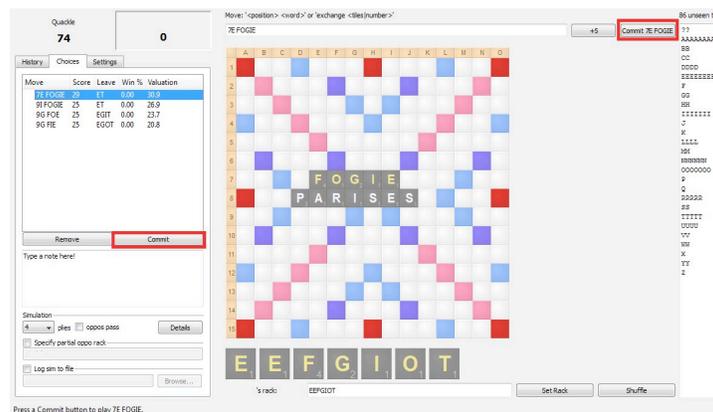


In the screenshot given above Speedy Player recommends (P)OURIE B10, which is unnecessarily risky for the player with a lead of 40pts – this is because it exposes a Triple Word Score which the opponent can use to score well on his turn. A better play would keep the board tight.

The Championship Player on the other hand is somewhat slower, as it does a short (approximately one minute, though it depends on the position and your machine speed) simulation of the top 50 plays based on static evaluation. As a result it is more positionally aware than the Speedy Player and tends to make more strategic moves.

### Playing a game against Quackle

This is generally a good form of training, as Quackle is a formidable opponent playing with full knowledge of the dictionary. To begin a game against the computer, select “New Game”, choose a computer player as your opponent, then hit “OK”. You will then be able to make moves as in a Scrabble game – the fastest way to do this is to click on the spot where you wish to play your tiles (double-click if you want to play vertically) and type the letters you will use to form the word (hold Shift for blanks). To confirm a choice immediately, either hit “Commit” or press Ctrl+Enter. To compare its static valuation (or do further simulation) against other choices, hit Enter – the choices you key in will be shown in a list under the “Choices” tab. Exchanges can be done by typing “exch <tiles>” in the upper text form beside the “+5” button.



In the above situation, FOGIE (7e) appears to be the strongest play in terms of static valuation. FOGIE (9i) keeps the same tiles but scores 4 points less – therefore its static valuation is 4 points less than FOGIE (7e). FOE (9g) and FIE (9g) score the same as FOGIE (7i), but the leave is slightly worse – therefore its static evaluation is lower.

Most players pit themselves against Speedy Player to save time; however Speedy Player does sometimes play unrealistically, taking the fun out of certain game positions. Playing against Championship Player may be more time-consuming, but it could be more rewarding in the long run.

### Using Quackle to analyse your game

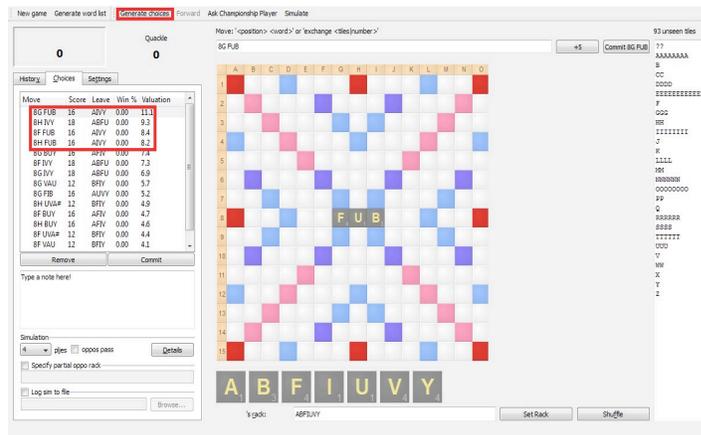
One of Quackle’s most useful functions is its ability to perform *post mortem* game analysis. The software contains powerful computational tools which allow one to analyse a move from different perspectives. A player will often use more than one tool at a time to identify the strongest plays available.

If you are analysing a game you have just played against Quackle, simply go to the “History” tab and double-click the move you wish to analyse. Careful – unless you know what you are doing, do not hit “Commit” as it will replay that move and erase the rest of the game history!

If you are analysing a game you have played against another human player, start a new game and choose “Human with Unknown Racks” as your opponent. Then, key in your and your opponent’s moves one at a time – you may edit your rack by deleting the original rack (from the lower text form beside the “Set Rack” button), typing the desired letters in and clicking “Set Rack” (or hitting Enter). Against a “Human with Unknown Racks”, you do not need to type in your opponent’s rack – just key the moves in directly and their racks will automatically adjust. If this was a game played with penalty points for incorrect challenges, these can be added in by selecting the move on the “Choices” tab and clicking the “+5” button.

### Static Evaluation

The most time-efficient method of reviewing one’s game is to do static analysis for each move of the game - this can be done simply by clicking on “Generate choices”. This will list up to 15 plays which have been identified as the strongest in terms of leave and score. It is also possible to generate 50 or even all choices (Move > Generate 50 choices or Generate all choices) but that is rarely necessary.



*By clicking on “Generate choices”, one can see a list of 15 choices ranked by valuation. For the first turn of the game, Speedy Player does consider the positioning of the move – FUB appears multiple times on the list, with different positions. 8F or 8H FUB are generally weaker because they leave a vowel exposed to the Double Letter Score. Note: Speedy Player may not make strong opening moves, and it is always better to simulate for the opening play.*

Static evaluation, of course, suffers from the same problems as the Speedy Player – one cannot fully understand the position just by looking at the score and leave of available moves. There are often many other considerations – e.g. the scoreline, the openness of the board, your next move – that may significantly influence your decision. It is not uncommon to see such considerations outweigh score and leave in expert play; static evaluation may thus favour choices that are far from ideal.

In most cases, though, it is possible to use a mix of human intuition (e.g. some of the playing strategies outlined elsewhere in this guide) and the list of Speedy Player choices to reasonably identify the best play each move. Only select cases demand further evaluation.

### *Ask Championship Player*

Championship Player (click “Ask Championship Player” – usually takes about a minute) tends to give a more reasoned assessment of the position at hand, and hence generally recommends stronger plays than Speedy Player. As well as pure simulation, it ranks plays according to *Bogowin* or Win %, which is an estimate of how likely you are to win the game, given the current scoreline and the number of tiles in the bag. While this is a more reliable algorithm than mere static evaluation, it is less accurate the earlier in the game you are, when there are more tiles in the bag. Do note that Championship Player is in essence a short simulation and in very difficult situations the simulation results may not be accurate. In these scenarios it is usually better to run longer simulations to determine the best play.

Asking Championship Player is the most useful in a pre-endgame or endgame situation, as it solves almost all endgames. This is one aspect where simulation is not as strong.

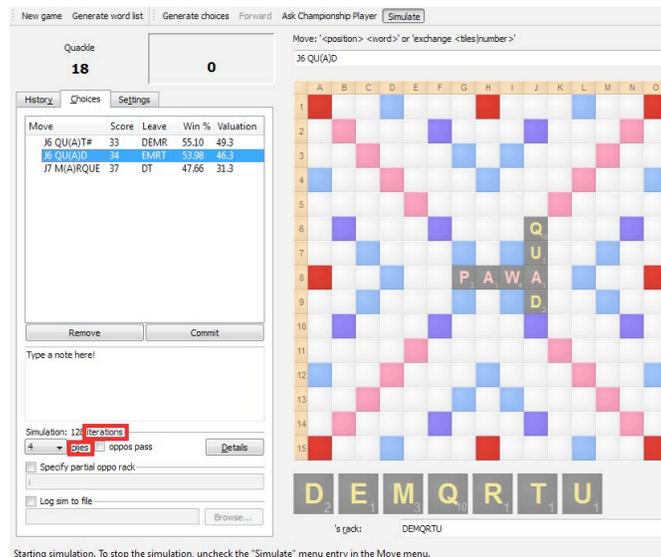
### *So what is 'simulation'?*

Simulation is the most time-consuming analysis tool available in Quackle, but it is also the most illuminating.

When Quackle is asked to 'simulate' a Scrabble position it takes the list of candidate moves and plays each of them on the board in turn. For each move it then plays a random response from an opponent and then a further move by you. If you select a deeper level of simulation it will then play a further response from the opponent and a further play by you. It does this for each of the candidate moves and in each case records how many points advantage each potential move will give you after the future plays have been totalled up. Then it repeats the process again and again until you tell it to stop. The longer you give Quackle to run a simulation, the more times it will be able to play each of the candidate moves and responses and so the more accurate the data will be.

Possible outcomes are randomly generated by assigning random racks to the opponent immediately after the choice move is played, followed by random draws for both players based on the unseen tiles. By having a large enough sample (i.e. by generating and calculating the averages for a large number of possible outcomes), the simulation can closely estimate the effectiveness of the choice moves, as defined by the indicators (the most relevant to this discussion being Win%).

To simulate a list of choices, bring up a list of candidate moves in the “Choices” tab and hit “Simulate”. You will see a screen similar to the one shown below. The plays will be ranked by Win%.



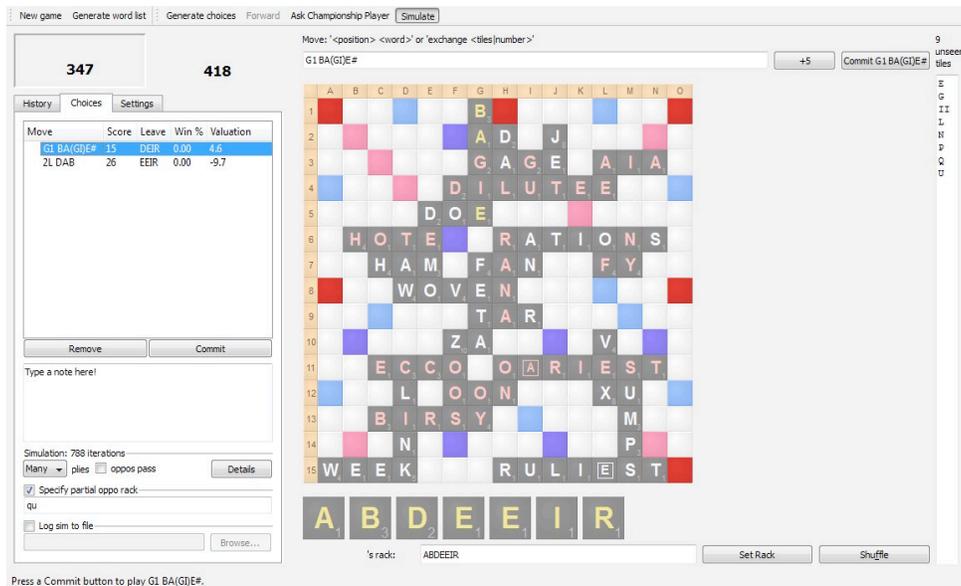
A simulation. For those interested in the result of the simulation, QU(A)T (j6) ends up with the highest Win% – possibly because it creates the QUAT-E hook, but also because DEMR works strongly with the existing A on the board.

It is critical to understand some terms at this juncture. First of all, “plies” are the number of turns you are simulating ahead of your current move. Hence 2-ply would be simulating your opponent’s response move to your play, as well as your move after that; and 3-ply would be analysing one additional move after that, etcetera. Most players will avoid odd-number plies tends because they tend to result in negative valuations, since you are simulating more of your opponent’s moves than your own. Use 2-ply or 4-ply to produce more meaningful data.

“Iterations”, on the other hand, are the number of times the simulation is being run (i.e. number of outcomes generated) to the number of plies you have selected. Running 4628 iterations on 4-ply would thus mean running four future plays 4628 times based on random draws. Therefore, the more iterations you run your simulation, the more accurate you would expect the result to be. It is often better to simulate with more plies towards the end of the game and fewer plies (about 2-4) at all other parts of the game. This is because the draws are too uncertain before the pre-endgame for many-ply simulations to be of much accuracy. However, towards the endgame, the tiles in the bag dwindle and it then becomes possible to simulate to a deeper level, as more certainty (of the tile draws) will be captured within the iterations.

A key caveat of the simulation is how the future moves are determined. Quackle uses its *static evaluation* to rank response plays, and hence the predicted response plays may also be devoid of positional awareness. For instance, setups are sometimes overvalued on simulation, as human players are more likely to react differently to obvious setups (i.e. by blocking the spot – computer players may think the player does not have the requisite tiles). Towards the endgame, it could be better to use Championship Player to get more accurate results, though it does sometimes generate wonky figures (best to click a few times and see what moves it throws up).

One feature that can be put to great use is the tile inference option – where you can simulate assuming your opponent is holding certain tiles. This can be done by checking “Specify partial oppo rack” and typing in your opponent’s tiles. This is perhaps helpful when your opponent has just played a phoney and you therefore know some of his tiles. It could also be valuable when your opponent has made a play which strongly suggests he holds a certain tile – for instance a setup with a specific hook, or a fish which suggests strong tiles. In such cases, you would have to use your own intuition to determine if your guess (of your opponent’s tiles) is right.



*In the situation above, the opponent has just played one tile at H2, forming D(AL). With the tiles in the bag, this strongly indicates that he is holding a U, which can hook in front of DAL to form UDAL and net a high score the next move. It is also possible he is holding a Q, since (especially in expert play) the opponent would only play a low-scoring setup if he were certain of a strong follow-up play. By simulating with inference of Q and U on the opponent's rack, the block of G1 BA(GI)E simulates stronger than the higher-scoring play 2L DAB. For reference, the letter O can also be hooked in front of DAL but there are no unseen O's in this game.*

Simulating with inferred knowledge of the opponent's tiles can yield very different results even in other situations. Imagine that your opponent has played a bonus with a phoney hook and has a blockable spot for the same bonus elsewhere. If you simulate without inference it is possible that the top plays on Quackle's suggestion list do not restrict his opportunities, or even give him better plays! Simulating with full knowledge of his rack would allow you to play your best move while minimising his opportunities.

## Conclusion

Although this article does not comprehensively cover all available functions of the software, it should hopefully clear up some of the technicalities and terms behind its usage, to make it more accessible to players. More experienced users should explore its intricacies further.

Indeed, Quackle is a powerful Scrabble analysis tool; but it is human input that makes its analyses complete. A great way to develop this instinct is to look at the best Scrabble players in the world and discern why they sometimes play differently from computers – while these differences may sometimes be due to human error, they may also reflect deeper thinking or strategy which computers, at least for the time being, cannot capture with simulations.

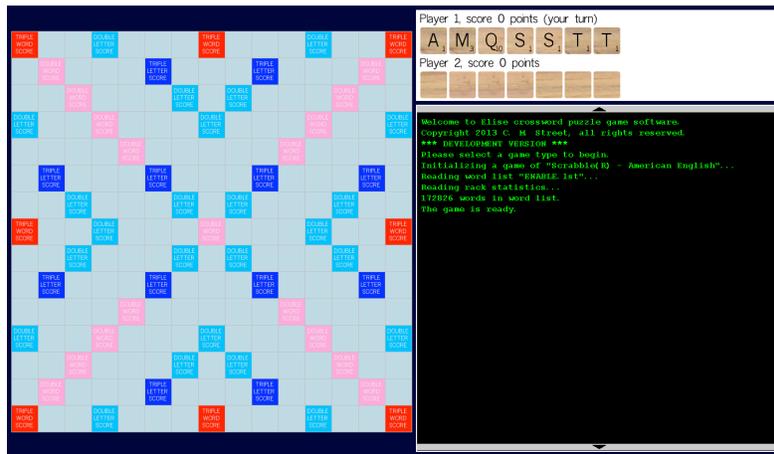
# Elise

(abbreviated from <http://www.codehappy.net/elise/basics1.htm>; visit here for the full version)

Elise is an incredibly strong computer player for Windows computers created by C. M. Street. While similar to Quackle, it also has additional features to analyze your game that many players find incredibly useful. This article will give you a quick rundown on how to use Elise.

To download Elise, go to [www.codehappy.net/elise](http://www.codehappy.net/elise) and scroll to the downloads section. Here, you'll find a link that will allow you to download Elise: simply follow the instructions!

After booting Elise, to begin a game click "Start game..." from the Game menu. This will allow you to select the type of game you want to analyze, the number of players, etc.



Start screen (click for full size image)

On the left is the board for the game type. On the right, you see the player's names, scores and racks, and below that is the text pane. Most text messages from Elise, including analysis results, will appear in the text pane. You can scroll the text pane by clicking the arrows at the top or bottom.

Ctrl+R ("Set rack..." from the rack menu) is the most direct way to set the contents of your rack. You just type the tiles you want on the rack, using "?" for the blank.

There are three ways to place moves on the board: drag-and-drop, typing your move (click on the board and an arrow will appear: click again to change the arrow's direction) or have Elise generate moves, and select a play from Elise's choices. To play a blank, either drag-and-drop or type question mark, and a prompt will allow you to designate the blank. To commit a move (by drag-and-drop or using the arrow), press Enter or Move. The move will be scored, a new rack will emerge, and the turn will be completed. If you play an unacceptable word, you will be warned but given the option to commit the move.

Special moves, such as passing your turn with or without exchanging tiles, are accomplished by selecting "Exchange..." (Shift+X) or "Pass" (Shift+P) from the Move menu. If you are exchanging tiles, you will be asked which tiles to keep.

## Using quick move find

Elise can generate possible moves from any position using the "Quick move find" (Shift+Q) option. The output of quick move find will look like this (up to 20 moves):

```
Quick: 1. CHUTNEE      10B 79 pts
Quick: 2. TEUCH        8K 39 pts [ EN]
Quick: 3. HENCE        8K 42 pts [ TU]
Quick: 4. TENCH        8K 39 pts [ EU]
Quick: 5. ETCH         8L 34 pts [ ENU]
Quick: 6. ECHE         8L 34 pts [ NTU]
Quick: 7. HENCE        10J 33 pts [ TU]
Quick: 8. HUE          10J 27 pts [ CENT]
Quick: 9. TEUCH        K9 26 pts [ EN]
Quick: 10. HEN         10J 27 pts [ CETU]
Quick: 11. HENT        10J 28 pts [ CETU]
```

Sample "quick move find" output

Blanks are portrayed in lowercase. The moves are sorted in order of quality, according to Elise. If you move your mouse over a move, Elise will show you that move. If you click on the move, that move will be made. Quick move generation can also generate end game moves, and will find a winning move, if it exists.

```
Using endgame algorithms.
Endgame: 1. AUGURS      A10 24 pts [ EN]
Endgame: 2. UNEAGeR     A8 27 pts [ U]
Endgame: 3. UNeAGER     A8 27 pts [ U]
Endgame: 4. AUGERS      A10 24 pts [ NU]
Endgame: 5. UNiQUE      E1 35 pts [ AG]
Endgame: 6. mANQUE      E1 35 pts [ GU]
Endgame: 7. UsQUE       E2 33 pts [ AGN]
Endgame: 8. tUQUE       E2 33 pts [ AGN]
Endgame: 9. aQUA        E3 31 pts [ EGNU]
Endgame: 10. QUA        E4 31 pts [ EGNU?]
Endgame: 11. AQUa       E3 30 pts [ EGNU]
Endgame: 12. GAFFE      C11 25 pts [ NUU]
Endgame: 13. QUA        E4 28 pts [ AEGNU]
Endgame: 14. QuA        E4 27 pts [ EGNUU]
Endgame: 15. ANGERS     A10 24 pts [ UU]
Endgame: 16. UNGUARd    A9 24 pts [ E]
Endgame: 17. AUGURy     A10 24 pts [ EN]
Endgame: 18. GRFF       C11 23 pts [ ENUU]
Endgame: 19. GUFF       C11 23 pts [ AENU]
Endgame: 20. GULF       C11 23 pts [ AENU]
Type 'y' to see more moves.
```

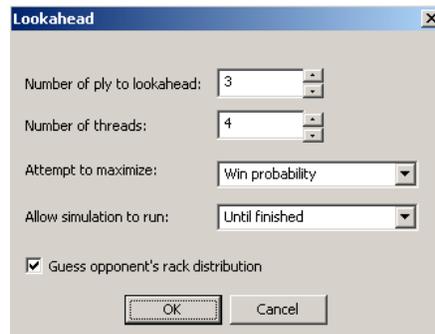
Sample end game move output

Above is an example of Elise's output during an endgame. Green indicates a winning move; red indicates a losing move, and white moves are unanalyzed.

## Using simulation move find

Elise's quick move find is strong, however Elise's simulation is stronger and can find clever moves that quick move would miss. Elise's simulation works by "lookahead": first, Elise determines a set of moves. Then, Elise plays the move and gives random tiles to its opponent. Elise then finds and plays its opponents' best moves (using quick algorithms). The entire process is repeated thousands of times. The results give Elise a range of possible outcomes from each candidate move. By comparing these results, Elise gradually eliminates weaker moves until only one "best play" remains.

To use simulation, select "Fast lookahead..." from the Move menu. This dialog appears:



The simulation dialog

In this dialog, you set the simulation parameters. The "number of ply" indicates how far Elise looks

ahead. Thus, "3-ply" simulation evaluates the current play, your opponent's reply (ply 1), your next turn (ply 2), and your opponent's next move (ply 3). (Higher ply value leads to better results. The downside: higher-ply simulations take longer to finish. You can press Esc to end the simulation early.) If you press Tab, the board disappears, and live simulation results will appear. To return to viewing the board, press Tab again.

When the simulation finishes, the results are displayed similarly to quick move:

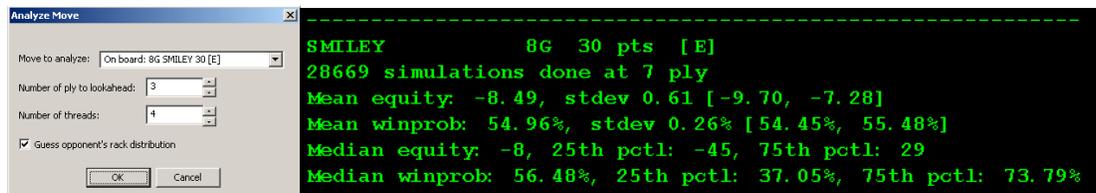
```
Total of 11670 simulations done.
Simulation done: 40.38 seconds
FastSim: 1. BEIGE      8D 22 pts -14.42 / 52.1% (2060)
FastSim: 2. BEING     8D 22 pts -18.16 / 50.7% (640)
FastSim: 3. BINGE     8D 22 pts -19.16 / 50.5% (480)
FastSim: 4. BEE       8F 10 pts -18.73 / 50.5% (480)
FastSim: 5. BEGAN     8D 22 pts -19.08 / 50.3% (480)
```

Results of lookahead simulation

Along with the word, the coordinates, and the score, we have two figures separated by a slash and a final value in parentheses. The first value is the static valuation. The second value is the estimated winning probability. The third number is the # of simulations.

If you hold down Shift while previewing a move, the board will be replaced with a heat map, showing the spaces your opponent is most likely to use in reply. The top number indicates the frequency your opponent will use that square, while the bottom number indicates the average score of those plays.

Sometimes you want to specify a few moves to analyze in depth. This is where you might want to try Elise's "Analyze move..." function (on the Move menu, Shift+A).



The analyze move dialog

The dropdown allows functions similarly to move generation. After you press "OK", Elise will begin simulation. It will continue until you stop it with the Esc key. Updates will be printed in the text pane with information about the simulation.

At this point, you can press Tab to see detailed information about the move -- which opponent replies are most likely and dangerous, your bonus probability next turn and opponent's, etc. Pressing Shift will show you the heat map. After you press Esc, Elise will stop simulation and output a final update with useful statistics about your play.

Other Features:

Elise has other useful features not mentioned here, including an inference engine, easy-to-find definitions and hook recognition, and more! Elise is essential for any real Scrabble enthusiast. Give Elise a try!

# Zyzyva

Chris Lipe

*“Only those who dare to fail greatly can ever achieve greatly” - Robert Kennedy*

Zyzyva ([www.zyzyva.net](http://www.zyzyva.net)) is a computer program written by Michael Thelen originally in 2004 which has many features indispensable to Scrabble players. There are functions for anagramming words, many options for searching the lexicon, a word judge feature, quizzes for word study, and an implementation of the Leitner Cardbox system for those who would like a more rigorous and structured word study program. The software is available at no charge.



This guide offers advice on how to use the most common and useful features in Zyzyva. A comprehensive guide to everything the program can do is available in a separate download from [www.scrabbleplayershandbook.com](http://www.scrabbleplayershandbook.com). However it is important to note that the best way of learning how to use the program is to open it up and just play around with the various searches and quizzes. If you see an option and you don't know what it does, try it!

Note that there is also an excellent “Introduction to Zyzyva” tuition video by Swiss player Curran Eggertson available at <http://www.youtube.com/watch?v=omqmVcb-ll4>

Zyzyva also has a [mailing list](#) and a [Facebook page](#) which are good places to ask questions.

## How to Use Zyzyva

After installing the software you will be asked which lexicon(s) you wish to be loaded into the database. This only needs to be done once as the program will remember your preferences.

## Searches

Clicking the magnifying glass icon on the Zyzyva toolbar will bring up a Search window.

There are a few powerful options built into the search function of Zyzyva that you can use to create some complicated and sophisticated queries against the lexicon. Besides entering letters that you're looking for, you can use the following:

- ? or . -- signifies a single wild card (i.e., a blank)
- @ or \* -- signifies zero or more wild cards. So pattern match of APE@ would return APE and all words that start with APE.
- [ and ] are used to set up a character class. A character class is treated in the search as one character which can match any member of the class. For example, searching for Pattern Match:[AEIOU][AEIOU] would return any word that consists of two vowels. [AEIOU] counts as one character that can match A, E, I, O, or U.
- The ^ can be used in a character class to negate that class. For example, [^AEIOU] will match any letter that is not A, E, I, O, or U. So Pattern Match:[^AEIOU][^AEIOU] would match any two letter word with no vowel.

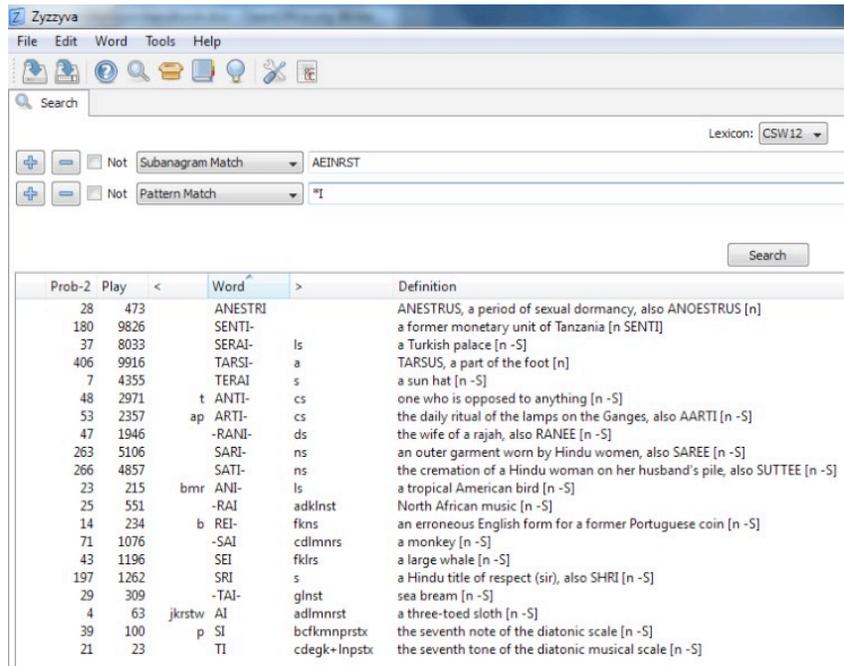
The most useful search options are:

- ▲ Anagram Match

Shows all the words that can be made by rearranging the inputs. Using the @ wildcard will give you all the words that contain the given letters in any order. For example, Anagram Match: QQ@ will show all the words containing two Q's.

^ Pattern Match

Shows the words that can be made given the inputs in the order provided. This is most useful using wildcards or character classes. Some examples are given above.



^ Subanagram Match

Shows all the words that can be made using some of the inputs provided. Note that using the @ wildcard with this option will return every word in the lexicon.

^ In Lexicon

Lets you choose from the lexicons you have installed in Zyzyyva so you can query on the union or intersection of two different lexicons. This is often useful when using the "not" check-box. For example, if you are searching the CSW15 lexicon, then choosing "Not" and In Lexicon: CSW07 you will get a listing of the words added newly to CSW15.

^ In Word List

This lets you search for words contained in an arbitrary list. The list of words should be in a text file, one word per line. You choose "Edit List", "Open File" and then the words in the list will be available to search on. This is especially useful to generate a Zyzyyva quiz or add to your cardbox a list of words you have tracked from a site like Aerolith, or words that had come up in games that might need special attention, etc.

^ Includes Letters

Only returns words that contain all of the letters indicated. Our query for two-Q words above could

also be written simply as Includes Letters: QQ. Using the “Not” will show words which contain none of the letters. So Includes Letters: “Not” AEIOU will return all the words with no vowels.

So as you can see, there are many different criteria to search with in Zyzzyva. You can combine these in any way you like, however -- clicking the “+” button to the left of a search criterion will add a new line to the search list. Multiple criteria entered will be joined together -- the words returned will need to fulfil all the criteria entered. Clicking the “-” button on the left will delete a criterion.

## Quizzes

Quizzes in Zyzzyva are the backbone of word study for many competitive Scrabble players. A quiz can be created from any search by right-clicking (control-clicking) on the results of a search, or by choosing the question mark icon in Zyzzyva and entering search criteria.

### Quiz Options

#### 1. Quiz Type:

1. Anagrams - This will ask you to enter the words found in a jumble of letters
2. Anagrams with Hooks - This will ask you to enter the words in a jumble of letters plus the hooks those words take, in a specific format. Namely, the answer should be: Front hooks (if any), space, the word, space, back hooks (if any). The spaces are not optional so if a word has no hooks, it should be entered as space, word, space. The space character will display as a : in the answer box. If you do not enter a response in this particular format for an Anagrams with Hooks quiz,



you will get the following error:

3. Word List Recall - This will display the search criteria you enter, and you will be required to enter all words that match that search criteria from memory, without seeing tiles or unscramble. This is good for quizzing you on stems or the like, as in, what are all the bonuses in TISANE + ?.
  4. Hooks - This will show you a word, and you need to enter the words made by hooking a letter to the front or the end. For example if the question is ARIA then the correct responses will be MARIA, VARIA, and ARIAS.
2. Quiz Method: This section will cover the Standard method. See the next section for an overview of the Cardbox method.
  3. Timer: You can set Zyzzyva to automatically declare an answer wrong if no responses are given in a certain period of time, or if all responses are not given in a certain period of time. This is commonly used - if you need to struggle for a response over a period of time, then the question probably ought to be reviewed, even if you do come up with the correct answer

eventually.

4. Restore Progress: When loading a saved quiz, do you want to restart where you last saved the quiz?

#### ⤴ Quiz Operation (Saving, Restoring)

Once you've set up a search for the questions you want in your quiz, and you've selected the options for the type of quiz, order of questions, etc., then you're ready to start.

- ⤴ The Next button moves to the next question in the quiz. It is only available after the current question has been marked as correct or incorrect.
- ⤴ Check Answers will show the answers to the quiz. It will mark the question as incorrect if the answers have not all been entered (unless you are in flashcard mode).
- ⤴ Mark As Correct / Incorrect allows you to toggle between marking a question correct and incorrect after it has been answered. This is useful in the case of typos, etc.
- ⤴ New Quiz... brings up the New Quiz dialog box, pre-populated with the criteria for the current quiz.
- ⤴ Save Quiz allows you to save both the contents and the progress on the current quiz.
- ⤴ When using a timer, the Pause button will be activated.
- ⤴ Normally, Zyzzyva will require you to type in each answer. In Flashcard mode, this will be disabled; instead, the space bar will reveal the answer, and the question assumed correct unless the Mark As Incorrect button is pressed. This is useful for going through quizzes more quickly.
- ⤴ Letter Order will rearrange the letters in various combinations. Clicking on the letters displayed will also scramble them randomly.

#### ⤴ Analyze Quiz, Quizzing missed words

As you go through your quiz, the Analyze Quiz button will give you information about how it is going along the way. The top half will show all words you missed, and a percentage correct. Note this is of words total, and not of questions -- getting 4 out of 5 anagrams of one question in an Anagrams quiz will give you 80% correct, but if you re-quiz on the one word displayed that you missed, you will need to answer all five of the anagrams again. The bottom half of the Analyze Quiz dialog will show you what typos you've made during the quiz.

If you right-click on the list of words you've missed, you will have an option "Quiz from List". This function allows a very popular way of quizzing a group of words. First, begin a quiz with a large group of words that you'd like to study, say, all the sevens. Then, save your progress as you go through the quiz. When you get to the end, go to "Analyze Quiz" and create a quiz from the list of words missed. Repeat this process until you've gotten each word correct once. This is a good way to do a once-over pass of lists of words.

## Cardbox

#### ⤴ What is Cardbox?

Many top players learn words by doing quizzes repetitively, and re-quizzing themselves on words they miss, over and over again until words have stuck in their memory. The disadvantage of doing complete quizzes over and over again is that after a while of doing

this, it will involve running through a list of 100 anagrams to find the 2 or 3 that you don't know; this is not efficient use of study time.

Zyzyva's cardbox feature implements a more structured study regimen. It keeps track of how often you get a question right or wrong and repeats that question at scheduled intervals, choosing the intervals for you based on your performance on that question. So if you keep getting a question right it will push that question further down the list and not ask it again for a while, but if you keep getting a question wrong it will come up more often until you've learned the answer. This is a much more efficient way to study!

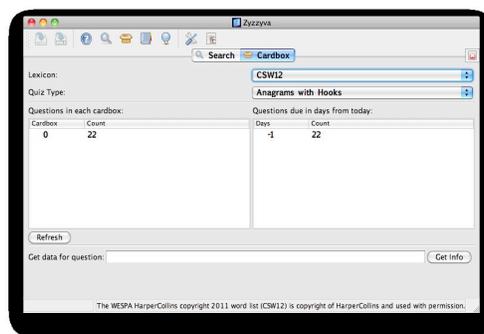
### ▲ Setting up a Cardbox

The Youth Scrabble website offers a useful [click-through tutorial](#) which may help you to set up a Cardbox.

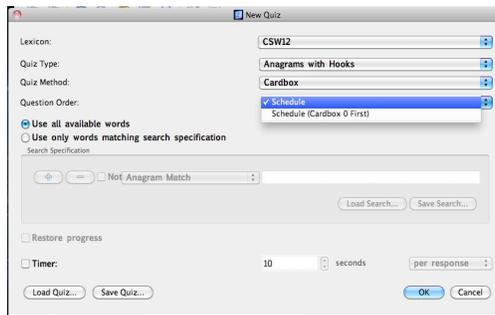
First, do a search in Zyzyva to find the list of words to add. Then right click in the list of words returned by the search (or CTRL-click on a Mac). Select "Add List to Cardbox".



Each cardbox is associated with a certain type of quiz. In this case, it will be an Anagrams with Hooks cardbox. If you were to then add words to an Anagrams-type cardbox, it would actually be in a separate cardbox instance. This can be a point of confusion -- if you add words to your cardbox and they do not appear, they may be in a different type of cardbox.

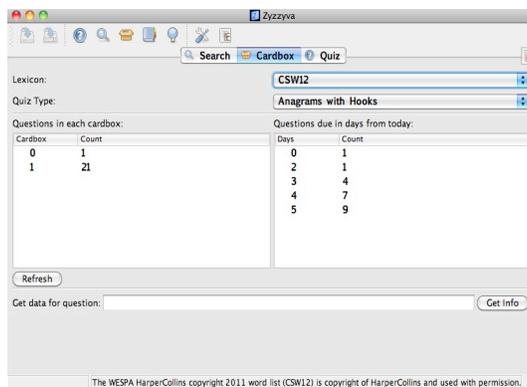


After adding the list to the cardbox, the Cardbox tab in Zyzyva will show some statistics about the cardbox after clicking "Refresh". In the above example, 22 cards have been added to Cardbox 0, and they are all due to be seen immediately.

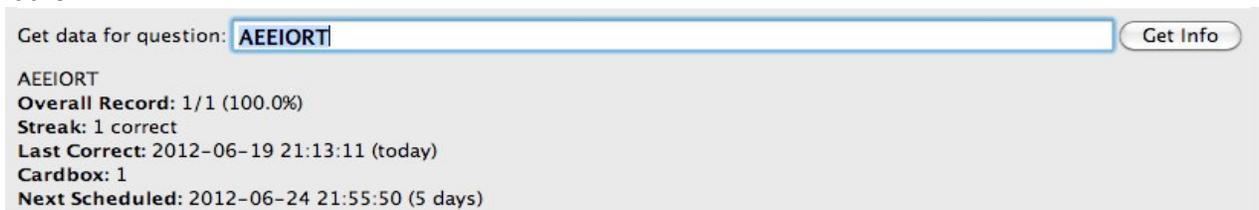


To do a quiz with those words, choose the correct Quiz Type, and choose “Cardbox” for the Quiz Method. Choosing “Schedule” for the question order will show cards which are due to be seen in the order they were scheduled; choosing “Schedule (Cardbox 0 First)” will show first all cards in cardbox 0 (regardless if they are due to be seen or not) followed by the rest of the cards which are due to be seen in the order they are scheduled. Note also that on the iOS version of Zyzyva there are additional options for ordering your cardbox quizzes (see below) which may at some point in the future be implemented in the desktop version of Zyzyva.

If you wish to quiz yourself on a subset of the words available in the cardbox you can use a search specification to narrow the quiz. This is especially useful to quiz yourself on one length of word at a time.



After the quiz is completed -- 21 out of 22 correct -- clicking the “Refresh” button on the Cardbox tab will show the following. The 21 cards answered correctly have been scheduled between 2 and 5 days in the future. The one card answered incorrectly is scheduled for sometime in the next 24 hours.



“Get data for question” will let you type in an alphagram and see the quiz statistics, as illustrated above.

## Summary

This chapter has explained the basic quiz and cardbox functions of Zyzyva. Comprehensive instructions on every feature the program has to offer, including details on how to synchronise the desktop Zyzyva with the iPhone app in order to maintain a single cardbox, can be found in the Help files of the program itself.

# Xerafin

Chris Lipe

Xerafin is a web-based cardbox tool, optimised for both desktop and mobile. It stores your cardbox file on the server, allowing you to coordinate quizzes between your desktop/laptop and mobile device. Xerafin also builds some intelligence into the cardbox system, adding and rescheduling words as necessary to adjust to the frequency of your word study. It also adds a social aspect to word study, making it less of a solitary bit of drudgery, bringing people together to support our collective cardboxing journey.

## Cardbox

A cardbox is a structured method of study based on the Leitner system. Given a selection of which words to study and your history of correct and incorrect responses studying the word, Xerafin will select which words you need to review on any given day.

Cardboxing is best done as a daily study regimen. Since Xerafin will decide for you which words need to be reviewed each day, it is most effective in helping you remember words if you complete what it presents to you each day. When adding new words to the system, Xerafin will ration to make the ratio between new words and review more manageable.

## Getting Started with Xerafin

There are three main ways to begin using Xerafin:

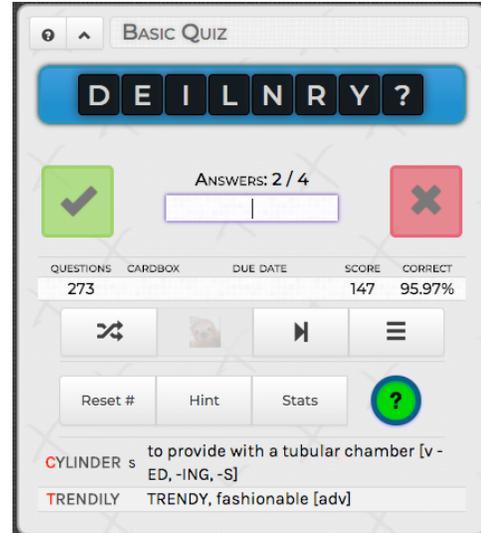
- Default - If you log in to Xerafin, it will create a cardbox for you, and begin adding words from a predetermined list, roughly in order of importance in a Scrabble game. It will start quizzing you on four letter words with JQXZ, and common seven and eight letter words, and expand from there. Newer players may find this study useful, as would seasoned players who want a review of the basics.
- Port from Zyzzyva - If you have an active Zyzzyva cardbox, you can import it into Xerafin using the following steps:
  - Go to Manage Cardbox menu -> Cardbox Database File
  - Under "Upload Cardbox", click "Choose File"
  - Choose the Anagrams.db file from Zyzzyva that contains your cardbox data
  - Click "Upload"

At this point, if you go to Cardbox Info, "Questions Due" tab, and choose "Overdue" from the dropdown at the top right, it should match the Zyzzyva Cardbox Info panel. From there you can go to any of the Xerafin quiz apps (Basic Quiz, Cardbox Invaders, etc) and continue progress on your cardbox.

- Upload Custom List - If you start from Default, but don't want to go through the words in default order, you can upload a list of words that will be added to your cardbox ahead of the default list. This is under Manage Cardbox -> Cardbox Database File -> Manage Words to Add. Here you can choose a text file with one word or anagram per line. It will be queued to be added to your cardbox next. Note that new words will not be immediately added to cardbox 0 as Xerafin rations new words to add based on how you are doing with review.

## Basic Quiz

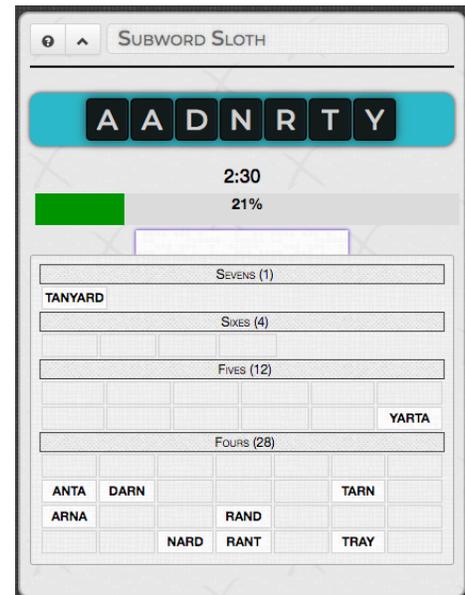
The Basic Quiz in Xerafin gives you words due from your cardbox, one at a time. The Basic Quiz screen features both a text box and buttons so they can be done with typed answers or as flashcards. This Xerafin is optimised for mobile devices and works well as a mobile flashcard app.



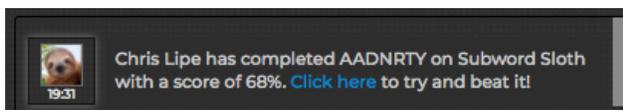
Basic Quiz has a Blank Quiz mode, which will take your next cardbox word and randomly replace one of the letters with a blank, to add an extra degree of difficulty.

## Subword Sloth

The Sloth icon on basic quiz takes you to the Subword Sloth minigame, which challenges you to find all the shorter words in the given word.



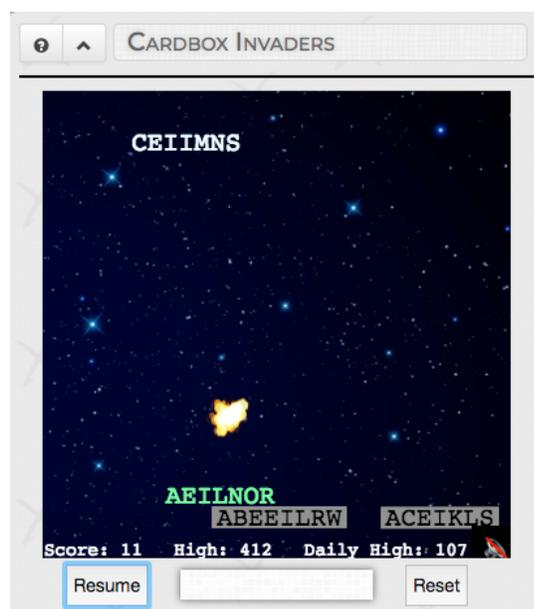
Once complete, your final score will appear in the chat pane with an invitation for other users to try the same quiz.



## Cardbox Invaders

Cardbox Invaders is a fun minigame which allows you to quiz words from your cardbox at a faster pace, with explosions.

Each word from your cardbox falls from the sky in turn, with the colour of the word indicating how many answers are yet to get. Once an alphagram is solved, it explodes. After a certain time, the alphagram turns grey, is marked wrong in your cardbox. Once the missed words pile up to the top of the screen, the game ends.



## Statistics

Xerafin has many statistics and views of both your own and sitewide activity. There is a daily leaderboard showing who has studied the most each day and where you rank among all users.

Rank	Player	Score
9 <sup>TH</sup>	MINA LE	427
10 <sup>TH</sup>	MATT BERNARDINA	401
11 <sup>TH</sup>	CECIL MUSCAT	400
12 <sup>TH</sup>	RICK BLAKEWAY	323
13 <sup>TH</sup>	NATALIE ZOLTY	320
14 <sup>TH</sup>	CHRIS LIPE	258

There are cardbox stats: displaying how many alphagrams are in your cardbox, where they are, and how many are left to go.

LENGTH	ALPHAGRAMS	IN CARDBOX	%
4	3491	3486	99.86%
5	8654	6559	75.79%
6	16999	5987	35.22%
7	27437	14033	51.15%
8	36327	14299	39.36%
9	38795	246	0.63%
TOTAL	131703	44610	33.87%

Cardbox Value: 522826 Questions Today: 258 Cardbox Movement: +150  
 Questions Due Coverage  
 Last Updated 19:44:37

CARDBOX	TOTAL	Due Now
0	4	
1	2	
2	61	
3	231	
4	270	
5	279	
6	1425	
7	988	
8	1273	
9	2822	
10	3349	
11	5826	
12	8570	1609
13	8540	2999
14	8194	6
15	2128	1
16	602	1
17	46	
TOTAL	44610	4616

Cardbox Value: 522826 Questions Today: 258 Cardbox Movement: +150  
 Questions Due Coverage  
 Last Updated 19:47:03

## Future Plans

Xerafin is still under development, with new features and refinements to the interface being released all the time. Some things which are planned include:

- A new interface to improve the way you can indicate which words you would like to study
- Concurrent multiplayer Subword Sloth
- Multiplayer cardbox rooms where users can study together
- More word-based minigames

# Scrabble Websites

While there's something special about feeling the tiles with your fingertips and hearing the sound of the tiles as they hit the board, there's no mistaking that online Scrabble is the next best alternative. Many players from all over the world congregate at these websites to celebrate the game we love!

Here are a list of some of the most prominent websites in the Scrabble community:

## Internet Scrabble Club

[www.isc.ro](http://www.isc.ro)

The *Internet Scrabble Club* is an online Scrabble server launched in March 2001. The site is run using Java and has recently converted into a web-based interface.

Many of the world's top players have registered ISC usernames and lists of identities can be found on the ABSP website and other local sites. However, the vast majority of players are non-competitive players and the range of ability goes down to beginner level so you are guaranteed to find plenty of opponents at your skill level. The simple but functional rating system allows you to keep track of your progress.

Wordbiz software suffers from rather clunky and unintuitive controls, although the Help files on the ISC website are comprehensive and should be read thoroughly. Updates to official tournament word lists are implemented promptly (which is more than can be said for the various licensed Mattel products, many of which have not been updated to use the Collins 2015 lexicon).

Like all gaming sites there are also a few players who play with obvious computer assistance, and a far greater number of players who will accuse most of their opponents of some kind of deception/cheating with little or no evidence. It is not uncommon for any player who produces a high probability bonus such as OTARINE to find themselves accused of cheating, without the accuser realising how ignorant this can appear to anyone of club level or above. Fortunately the site also provides users with a 'no-play' list for blocking undesirable opponents; this is the only sensible course of action as nearly all formal complaints to the Admin/Helper team are ignored.



*The editor takes a particularly severe beating at the hands of an ISC computer player*

However, a good number of friendly, courteous and challenging opponents can be found online at

any time and many long friendships have been formed on ISC over the years. Of course the site is also a fantastic method of encouraging Scrabble enthusiasts to take that first step into competitive face-to-face play and many hundreds of keen tournament players started out with several years of ISC play before finally stepping out into the 'real world'. It is a move that very few have regretted.

The site was amongst the first to offer Scrabble online using a no-challenge mode known here as 'void' mode. This involves each play being automatically verified by a computer as it is made so phoney words are impossible. From the perspective of competitive play this is disastrous as it makes players unaccustomed to checking their opponent's words, a vital part of the game of Scrabble. However the real travesty of 'void' games is that attempting to play a phoney word does not result in the loss of a turn, meaning that players can try as many combinations of letters as they can think until they find a valid play. The often heard argument that playing with 'void' mode helps a player to learn new words is a fallacy as memory retention levels drop significantly with this "thought-free" variant; there is very little need to learn any words in order to play this form of Scrabble. The correct way to learn words is through an organised study programme using Zyzyva software and to be punished by losing a turn through a phoney, rather than removing the possibility of making a mistake and just hoping that the words will somehow 'stick'. Likewise, players who simply run their racks through an anagram program might believe they are learning new words but in reality will remember very little of what they have played; they are only cheating themselves. Although fine for casual "kitchen table" Scrabble, the challenge-free variant of the game has no place in competitive play and we strongly recommend playing with at least *single challenge* mode whenever possible.

It is best not to take ISC games seriously. Much like playing against Quackle, the real benefit of playing practise games on the site is to gain experience for playing real opponents face-to-face. The results of online games don't matter and ISC ratings should be taken with a large pinch of salt due to the easy availability of anagramming software. The 'void' challenge games being rated in the same system as normal games also grossly distorts the ISC ratings; consider the relative merits of a 1200-rated player who has played *single challenge* games against human opponents and another 1200-rated player who has used 'void' mode while playing the ISC bots (computer opponents), being allowed as many attempts as they need to find a valid play. When you start to play competitive face-to-face, you will find your ISC rating no longer really matters at all.

Despite its limitations, ISC remains a valuable resource to the Scrabble community and if you don't want to spend your whole time being beaten by Quackle or simply fancy mixing things up with the occasional human opponent, we recommend logging on, playing a few games and chatting to a few like-minded folk. Of course for many people, you just can't beat sitting down face-to-face and drawing those real Scrabble tiles out of a real tile bag. There is no substitute!

Some of us can be found on ISC under the following usernames:

<b>aphis</b>	Andrew Fisher	<b>dewk</b>	Dave Koenig
<b>evzone</b>	Evan Berofsky	<b>kmatsumoto</b>	Kenji Matsumoto
<b>Malomar</b>	Kevin McMahon	<b>mitsurugi</b>	Paul Gallen
<b>taqi</b>	Edward Okulicz	<b>Tokoloshe</b>	Stewart Holden
<b>twq</b>	Toh Weibin	<b>Winchelsea</b>	Ed Martin

If you see us online, don't be afraid to introduce yourself and say hi!

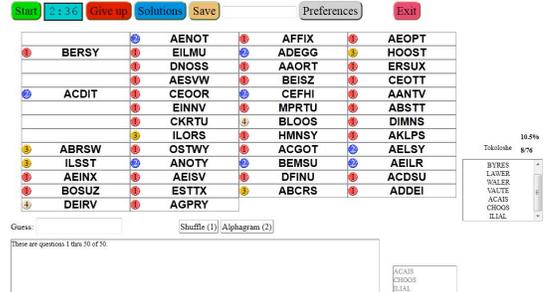
# Aerolith

www.aerolith.org

Aerolith is a website for practising anagramming skills and learning words, using the interactive WordWalls software written by US expert Scrabble player Cesar Del Solar.

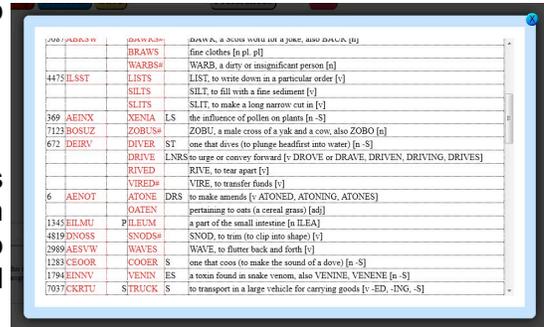
A player is faced with a 'wall' of anagrams of a particular length (e.g. 7s) and given a fixed time limit to solve as many as possible. When the time runs out the player is given the solutions to the missed anagrams, along with their hooks and definitions.

The default colour scheme is a rather garish green background with coloured tiles, but fortunately this can be changed in the Preferences which can be accessed when a game starts. Options for arranging the letters in alphabetical order or to randomly shuffle them also exist.



## Daily Challenges

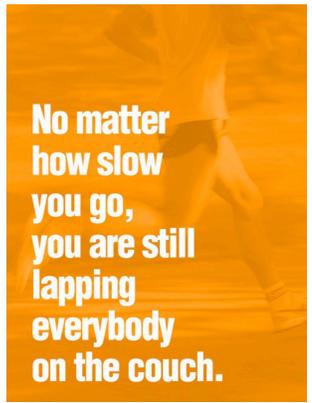
Every new day a wall of words of each length appears on the site. The words are selected randomly from across the full probability range for any length, so ETAERIO or COBWEBS will appear with equal probability!



Each Challenge can only be attempted once and all player's scores for the day are shown on a leaderboard. At the end of 24-hour period the scores are wiped and new sets of anagrams appear. Rewards in the form of 'medals' are available for good performances for each word length.

If you decide to attempt all Challenges of words from 2-8 letters you will need to allow between 30-45 minutes in total, but individual walls last no more than five minutes which makes Aerolith a quick and enjoyable way of sharpening the mind and developing those crucial anagramming skills.

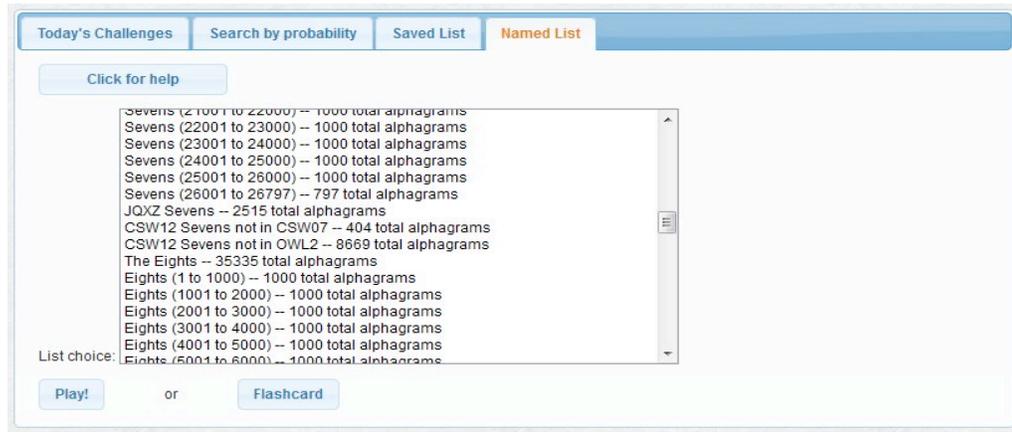
Some people have found it too daunting to have their Challenge scores displayed for all to see, especially new players who will struggle to solve low-probability words taken from the entire lexicon (in fact many experts would struggle with these too!). However there is no compulsion to register with the username you are known by on other sites and many players deliberately choose to remain anonymous. The competitive element of the site is actually fairly meaningless since all scores are deleted at the end of every day. The important point is to be competing against yourself and knowing whether you are gradually improving... and even if the personal best you have just set is only a score of 6% as opposed to your previous 4%, you still know more than you did yesterday.



## Named Lists

Perhaps more useful for study purposes, especially at beginner level, are the prescribed lists of bonuses sorted by probability and other commonly used lists of shorter words, which you can attempt as many times as you like. This is good if you fancy a break from word quizzing in Zyzzyva

and fancy a more fun form of anagramming. The results are not displayed anywhere and the site keeps no record of any kind.



This screenshot shows a small sample of the study-friendly word sets which you can attempt as many times as you like.

In both kinds of game, when the timer has run out you are shown the answers and then have an opportunity to attempt the same wall again with only the questions you previously failed to answer. You can do this an unlimited number of times and if you have sufficient will power to eventually solve every question you deserve a hearty pat on the back!

Although Zyzzyva remains the number one study tool for all Scrabble players, especially with the use of the Cardbox feature, we recommend keeping Aerolith in your bookmark folder and finding time to attempt the Daily Challenges whenever you can or saving a few Named Lists to help the learning process.

# Mindsports Academy Sports Room

Sumbul Siddiqui

Mindsports Academy is a fun and interactive website which allows you to play Scrabble and other Mindsports. The premium version allows you to have a video call with the player you want to play. This can help you learn as you can get a chance to be coached by one of the best players in the world. The Sports Room (below) allows you to play any game you want, and you can challenge different people from around the world. Additionally, it allows you to play tournaments and win shields, or play tournaments where you win cash prizes! Furthermore, joining the Sports Room allows you to access tips and articles written by some of the best players in the world!

Secure | <https://www.mindsportsacademy.com/sportsroom>



WORD GAMES		CHESS		GO			
Player v Player		Player v Computer		Tournaments		My Games	
PLAYER	RATING	FRIENDS	LANGUAGE			ACTION	
badmus (Away)	1300	✓				<b>CHALLENGE</b>	
rsweet (Available)	500	✓				<b>CHALLENGE</b>	
AaronO (Available)	1050	+				<b>CHALLENGE</b>	
ashika (Playing)	400	+				<b>CHALLENGE</b>	
crispywafer (Away)	949	+				<b>CHALLENGE</b>	
Doreen (Available)	997	+				<b>CHALLENGE</b>	
kini (Playing)	818	+				<b>CHALLENGE</b>	
Kyle (Available)	999	+				<b>CHALLENGE</b>	
miagiMungy (Playing)	684	+				<b>CHALLENGE</b>	
MSAadmin (Available)	420	+				<b>CHALLENGE</b>	

## English Chatroom

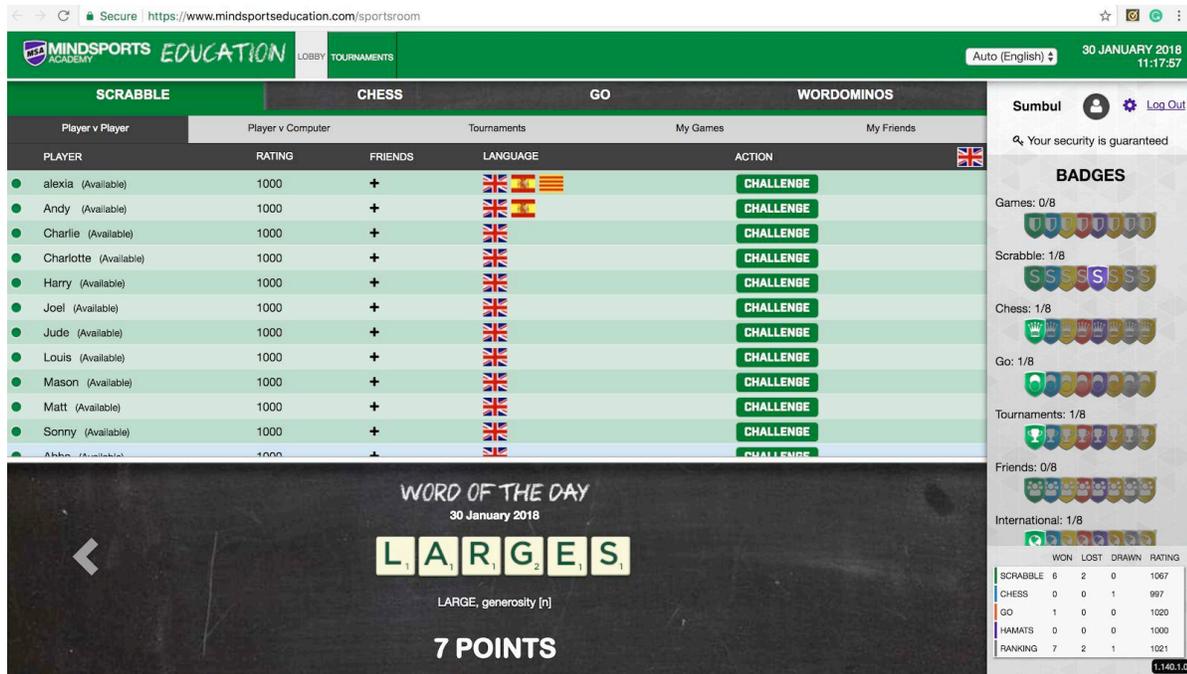
- miagiMungy "hmm, just about managed to play the 10 games through on Sunday, but the connection was not working well"
- MSAadmin "miagiMungy, Hi, Sorry to hear about the games not loading, we will get our developers to look at this today."
- MSAadmin "miagiMungy, I will send you an email regarding the challenge today"
- miagiMungy "Thank you Natasha"
- miagiMungy "I have completed another day"
- rsweet "Not long to go :)"

Type your message here. Press Enter to send.

# Mindsports Education

Sumbul Siddiqui

Mindsports Education is very similar to the Academy site; however, it is aimed at students and teachers with a school interactive programme that can be used in teaching. On Mindsports Education, you can play against your friends or schoolchildren from other schools. Mindsports Education uses shields as a way to keep track of your success on the site: compete with others to earn as many shields as possible! The more you play, the more shields you win! Shields can also help you improve your rating!



(Note: Thank you for reading. I'm Sumbul Siddiqui. I'm the Youth Scrabble Ambassador for Mindsports Academy, and my role is to promote Scrabble within youth communities around the world. You can find my videos on the website or on the Facebook page.)

## Other websites:

### WESPA website

[www.wespa.org](http://www.wespa.org)

This site has the latest news in the world of tournament Scrabble, including recent results and upcoming tournaments, rankings, pictures from upcoming tournaments, as well as links to your local tournament scene. If you want to know what's happening in tournament Scrabble, this is the place!

### Cross Tables

[www.cross-tables.com](http://www.cross-tables.com)

Cross tables has the largest assortment of player records and annotated games within the world of tournament Scrabble. Here, you can watch and download games played by many of the best players in the world, allowing you to analyze how these players play and allowing you to play along. Cross-tables also keeps head-to-head records and numerous stats, recording players results spanning back decades.

### Breaking The Game

[www.breakingthegame.net](http://www.breakingthegame.net)

Breaking the Game contains articles on Scrabble strategy for players of all levels. Whether you're a tournament level player who wants to learn advanced strategy to move up the ranks contains numerous articles, videos, puzzles, and other content that break down strategic concepts, enabling its readers to improve at the strategic aspects of Scrabble.

### Instawordz

<https://instawordz.com/scrabble-word-finder.html>

Instawordz is a [word finder](#) that will allow you to find anagram solutions up to 12 letters long. Instawordz can help you find anagrams to see what you may have missed in your Facebook Scrabble or Words with Friends games! If you want to find word solutions in any rack of tiles, and find words that might exist with your Scrabble tiles, head over to Instawordz today!

# Scrabble Apps

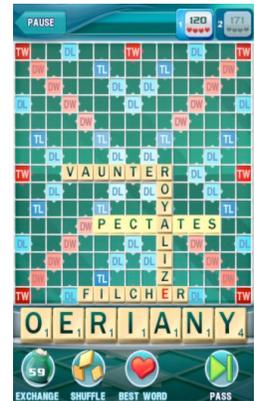
A variety of word apps exist for various smartphone mobile devices and handheld tablets. Here is a selection of both the official offerings and those of interest to Scrabble players.

## iOS (iPad, iPhone, iPod Touch):

### *Scrabble by Electronic Arts (EA)*

Mattel and Hasbro have both licensed EA to produce official Scrabble apps for Apple products, the availability of which depends on your location.

The Mattel app only offers the option to play against a computer opponent. Shockingly, there is no facility for playing against other human friends; this is in comparison to the many rival Scrabble-like games which are played by tens of millions of people against their friends across the world. The dictionary used is not one produced by Mattel's official licensee Collins Dictionaries; it is a variation of the outdated CSW07 but with nonwords such as AXS\* and QUO\* deliberately added in. The reason for this is unknown. The computer opponent has been programmed not to use a blank tile for a move scoring less than (approx.) 25pts but applies this rule into the endgame as well, meaning that with a final rack of E?? it will use the E alone first, then one blank in the next move and finally the second blank in a third move. The 'hard' difficulty setting does not play the optimal move available every time, as demonstrated in the screenshot (right) in which the double-double SPECTATE would have been significantly superior. Overall the app is very poor and of little interest to competitive players.



Hasbro's Scrabble app for players in North America, which plays to TWL lexicon only, fares better by offering the crucial multi-player function against randomly selected opponents from an online forum or against your Facebook friends, along with a built-in chat facility. However it also lacks tile tracking and other features common to competitive Scrabble. The app offers a 'Teacher' function which assesses your previous play using smiley or sad faces but this is based purely on score, with no consideration of rack leave, strategy or board position.



### *ULU (Ultimate Lookup Utility)*

ULU is a quick, easy to use and free word-finding app which features CSW15 lexicon amongst its default options. ULU's search page enables you to find words that match letter combinations with blanks or any pattern, or any words that contain a subset of letters that you input.



ULU also comes with a judge page for tournament Scrabble, along with other lookup features. Try ULU today!



### *Adnoto*

A highly recommended score-keeping app which records racks, moves and points and output the data in useful formats, including the .gcg files used by Quackle. Use of mobile devices in tournament games is forbidden but this is very handy for friendly games.

### **Android:**

An exhaustive list of Android wordgames would be impossible, but *Scrabble Assistant* and *Word App* are word-finding tools known to contain the correct CSW15 dictionary.

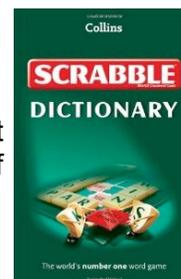
# Scrabble Books

*These are the books you should strive to own if you are a competitive player using CSW15. Due to the plethora of similar-sounding Scrabble titles published by Collins over the years we have included the ISBN numbers for those titles, these should be checked before making any purchase.*

## Collins Scrabble Dictionary (2015 edition)

ISBN-13: 978-0007589135

The official dictionary of tournament Scrabble!. A weighty tome with small print but extremely useful for both word adjudication and for those who find definitions of interest or of benefit for word learning.



## Collins Official Scrabble Lists (2015 edition)

ISBN-13: 978-0007589166

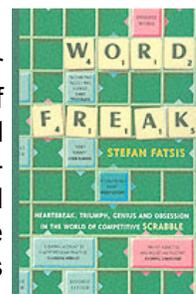
The useful companion to CSW15, this contains word study lists starting with 2s, 3s and 4s and moving to high-playability shorter words, essential bonus stems (e.g. AEINRT+1) and a complete list of all 7s and 8s in alphagram form. Very little in here could not be generated by Zyzzyva and a printer but you can't beat having the book for portability.



## Word Freak: Heartbreak, Triumph, Genius and Obsession in the World of Competitive Scrabble

*Stefan Fatsis*

This is the novel which many of today's expert players cite as their inspiration for taking their first steps into the Scrabble world. In this compelling mixture of travelogue, history, party journal, and psychological study, Wall Street Journal writer Fatsis gives us all the facts about Scrabble, from the story of the down-on-his-luck architect who invented the game in the 1930s to the intricacies of individual international competitions and the corporate wars to control the world's favourite word game. The tournament elements are US-centred but the tales and characters will be familiar to players from any part of the world.



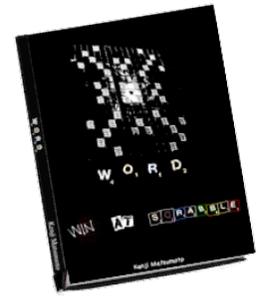
Fatsis keeps the reader turning the pages as we get involved in the lives of the men and women who have a point to prove against the world and have chosen Scrabble as their playground and their pulpit. *Word Freak* made the New York Times best-seller list when released in 2001. A brilliant read for anyone who fancies a well-written and humorous novel about Scrabble and a 'must have' for all club or tournament players.

## Word

*Kenji Matsumoto*

Written by one of the editors of the *Scrabble Player's Handbook*, *Word* guides players through the concepts and components of Scrabble strategy. *Word* goes step-by-step, guiding players through fundamental concepts such as hotspots, anagramming, leave, fishing, setups, and much more!

Whether your goal is to beat your grandma at Scrabble or to become one of the best players at the local Scrabble club, *Word* teaches you how to win at Scrabble! *Word* is endorsed by many of the best players around the world as the authoritative book on Scrabble strategy. *Word* can be found [here](#) as well as at Kenji's website at <http://www.breakingthegame.net/word>

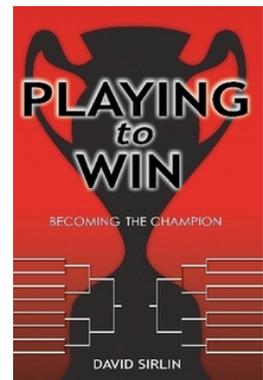


For those interested in advanced level Scrabble strategy, Matsumoto has also written a book on expert-level tournament strategy available at <http://www.breakingthegame.net/scrabblesolved>. He also sells TWL versions of his books at <http://www.breakingthegame.net/breakingthegame>

## Playing To Win

*David Sirlin*

Available to purchase in printed form but also to read for free online at [www.sirlin.net/ptw](http://www.sirlin.net/ptw). Arcade game expert David Sirlin's widely-acclaimed work on competitiveness makes only passing reference to Scrabble, but it is essential and inspiring reading for anyone interested in psychology behind competition. Many of the topics covered and the points he makes are readily applicable to Scrabble and you will recognise character types found in any competitive activity. *Playing To Win* will sharpen your mind and help you to avoid the bad thinking which ties so many players to their current level for evermore. An inspiring read!



## Letterati

*Paul McCarthy*

"An unauthorised look at Scrabble and the people who play it", this is an entertaining and detailed look at the history of Scrabble from every angle – as both a corporate brand with multiple owners over more than 60 years, and as a family parlour game enjoyed by millions which is rapidly gaining recognition as a competitive mind sport.

This guide charts the development of competitive Scrabble in North America and the control of the game exerted by Hasbro, Inc., the holder of the game's trademark. Through more than a hundred interviews, the evolution of Scrabble from the hustler-populated game rooms of New York City in the 1960s, before the organised game even existed, to the North American National Championship, where more than 800 players vied for \$89,000 in prize money is detailed. Examining its origins, strategies, changes, and the business behind it all, this is a comprehensive look behind the game of Scrabble.



# Scrabble Around The World

There are a range of mailing lists, discussion forums and Facebook pages depending on your home country. These keep you up-to-date with tournament results as they happen and most of them regularly feature articles of interest, Scrabble puzzles, photos, etc.. If you want to get into the Scrabble scene then joining a mailing list and joining your local Scrabble association are the best ways to start.

You do not need to belong to a club or already be a tournament player to join your national Scrabble association: simply find the membership details on the appropriate website. Most associations produce periodic Scrabble newsletters and offer discounts on tournament entry fees.

WESPA (World English-language Scrabble Players Association) is the umbrella organisation for all national competitive Scrabble associations. The [WESPA website](#) and [WESPA Facebook page](#) are a good source of information and Scrabble activity for players of all levels.

For youth players aged 18 or under there is a dedicated [Youth Scrabble](#) website with advice aimed at younger players. Many Scrabble associations have one or more officers dedicated to the promotion of Scrabble clubs in schools and as a young person's competitive activity.

The following may also be of interest:

Other Facebook Groups:

[Scrabble Snippetz](#): The largest Scrabble Facebook group on the internet, currently run by UK player Nicky Huitson!

[Scrabble International](#): Scrabble Facebook group run by 2017 World Champion David Eldar and world class player Austin Shin, focusing on international Scrabble discussion as well as tablet Scrabble!

**YouTube:**

[ScrabbleKenji](#) -- Strategy and analysis by editor Kenji Matsumoto

[Dweebovision](#) – videos of ISC games by UK Grandmaster David Webb with commentary.

# Scrabble Organizations around the World

(Note: If links are not clickable, please use Adobe Acrobat Reader)

Country	Association (website)	Facebook	Mailing List (click link to subscribe)
Australia	<a href="#">ASPA</a>	<a href="#">Scrabble NSW</a>	<a href="#">oz-scrabble</a>
Canada	<a href="#">NASPA</a>	<a href="#">NASPA</a>	<a href="#">naspapro</a>
Hong Kong	<a href="#">HK Scrabble</a>	<a href="#">HK Scrabble</a>	
India		<a href="#">Scrabble India</a>	
Indonesia	<a href="#">ISF</a>	<a href="#">ISC Group</a>	
Ireland	<a href="#">All Ireland</a>		<a href="#">irishscrabble</a>
Israel	<a href="#">Jerusalem</a>	<a href="#">Scrabble Israel</a>	
Kenya	<a href="#">Scrabble Kenya</a>	<a href="#">Scrabble Kenya</a>	<a href="#">kenya-scrabble</a>
Malaysia	<a href="#">Penster</a>	<a href="#">Penster</a>	
Malta	<a href="#">Scrabble Malta</a>		
New Zealand	<a href="#">Scrabble in NZ</a>		
Nigeria	<a href="#">NSF</a>	<a href="#">NSF</a>	<a href="#">scrabaf (Africa)</a>
Pakistan	<a href="#">Pakistan Scrabble Association</a>	<a href="#">Pakistan</a>	
Philippines		<a href="#">Scrabble Phils</a>	
Singapore	<a href="#">Toucanet</a>		
South Africa	<a href="#">ZA Scrabble</a>	<a href="#">Scrabble SA</a>	<a href="#">scrabsa</a>
Sri Lanka	<a href="#">Scrabble LK</a>		
Sweden	<a href="#">For Bundet</a>		
Trinidad and Tobago		<a href="#">T&amp;T Scrabble</a>	
UAE		<a href="#">UAE Scrabble</a>	
UK	<a href="#">ABSP</a>	<a href="#">British Scrabble</a>	<a href="#">uk-scrabble</a>
USA	<a href="#">NASPA</a>	<a href="#">NASPA</a>	<a href="#">naspapro</a>

## Scrabble content in the media

*The Times (UK)* – Scrabble puzzles every weekday and a strategy column every Saturday (by Paul Gallen)

*The Guardian (UK)* – Scrabble target puzzle every Saturday (by Stewart Holden)

# Youth Scrabble

Sumbul Siddiqui

Scrabble is a word game many of us run away from because it's assumed to be nerdy! Scrabble is played all over the world by adults - however, Youth Scrabble is also becoming increasingly popular and is on the rise in many countries such as Pakistan, Sri Lanka, India, Thailand, Malaysia, and the list continues.

The Youth Scrabble scene is different in different countries. Some countries are lacking the required assistance to promote Scrabble within the youth community while others are taking the world by storm! Pakistan's recent inter-school Scrabble championship was a two-day event in January 2018 with over 2000 kids playing the game under one roof. This is record breaking!

This highlights a global imbalance when it comes to Youth Scrabble. In some countries (especially in Asia) Scrabble is seen as a game which improves vocabulary and helps you with English and Maths, therefore it's a part of the school curriculum and after-school clubs are in place to promote participation. Whereas in English speaking countries (mainly UK, USA, Australia, New Zealand) it is perceived as a fun, family-friendly game. This major difference of perception and culture tells us the reasoning behind the global imbalance in Youth Scrabble.

So, if you are reading this and you think you can play Scrabble, give it a go! There are many websites where you can play online, and sometimes against the best players in the world. There are a few reasons why you should consider playing Scrabble. Firstly, it develops you as a person, improves confidence, leadership and communications skills - these are life skills that will be needed in every phase of your life. Secondly, it gives you a chance to travel to different countries - an indescribable experience. Lastly, who doesn't want to represent their country at an international tournament? Additionally, being passionate about a hobby or a game can help you stand out and prove your abilities!

## Youth Scrabble Information

Name	Country	Email Address	Organisation URL
Karen Richards (Chair)	Australia	karen.d.richards@gmail.com	<a href="http://www.scrabble.org.au">http://www.scrabble.org.au</a>
Shan Abbasi	Canada	Shan19@gmail.com	<a href="http://www.scrabbleplayers.org/canada">http://www.scrabbleplayers.org/canada</a>
Chris Lau	Hong Kong	Chris.lau@hkscrabble.org	<a href="http://hkscrabble.org">http://hkscrabble.org</a>
Neeta Bhatia	India	neetaharry@hotmail.com	<a href="http://www.facebook.com/scrabbleindia">www.facebook.com/scrabbleindia</a>
Martin Teo	Malaysia	loslyfs@gmail.com	<a href="http://www.penster.com.my">http://www.penster.com.my</a>
Ruth Groffman	New Zealand	ruthgroffman@hotmail.com	<a href="http://www.scrabble.org.nz">http://www.scrabble.org.nz</a>
Tariq Pervez	Pakistan	tariqp@gmail.com	<a href="http://www.pakistanscrabble.org">www.pakistanscrabble.org</a>
Liew Kian Boon	Singapore	lkbinthezone@gmail.com	<a href="http://www.toucanet.com">http://www.toucanet.com</a>
Ruvini Fernando	Sri Lanka	ruvinif@carcumb.com	<a href="https://scrabble.lk">https://scrabble.lk</a>
Akkarapol Kwansak	Thailand	akkarapolkwansak@gmail.com	<a href="http://www.thaicrossword.com">www.thaicrossword.com</a>
Lynne Riley	UK	lriley157@gmail.com	<a href="http://www.absp.org.uk">www.absp.org.uk</a>
Cornelia Guest	USA	corneliasguest@gmail.com	<a href="http://www.scrabbleplayers.org">http://www.scrabbleplayers.org</a>
	Malta		<a href="http://www.scrabblemalta.com">www.scrabblemalta.com</a>

# Scrabble Equipment

Competitive Scrabble uses playing equipment designed for more regular usage than standard commercial Scrabble sets. Your loved ones will never again have the problem of not knowing what to buy you for Christmas.

## Scrabble boards

Scrabble clubs tend to use standard Hasbro or Mattel Scrabble boards. However at tournament level many players purchase circular boards which rotate within their own area (see picture). Generic high quality round boards are available from <https://the-tile-fairy.myshopify.com/products/compactscrabbleboards> while beautiful personalised circular boards are found at [www.customscrabbleboards.com](http://www.customscrabbleboards.com).

## Tiles

Tiles must be smooth and “non-brailleable” in order to avoid any suspicion of players trying to identify letters inside the bag (in particular the blanks). The overwhelming majority of players use Protiles, available directly from [www.protiles.net](http://www.protiles.net) or local distributors.

## Timer

Also known as a chess clock, this keeps time for both players. Most timers designed for chess are not suitable for Scrabble because they fail to measure overtime; this is because running out of time in chess leads to an automatic forfeit while in Scrabble the standard penalty is 10pts per minute or part-minute. There are several Scrabble clock apps available on both the iPhone and Android. If you would like to get a physical clock, ZMF chess makes several suitable clocks for Scrabble at <http://zmfchess.com> (check first to make sure it's suitable for Scrabble!) and the ABSP sells clocks.

## Other

A range of other Scrabble accessories such as tile bags, scorebooks with pre-printed tracking grids and other items can be found on most of the websites mentioned above. For UK and European readers, [Tile Fairy](#) are well known stockists of most items for competitive players.

# Glossary

Edward Okulicz

**AGGREGATE** Either the total of both player's scores in a game, or the total of a player's scores in a tournament or series of games. Very few tournaments use aggregate to rank players, this is more commonly done using **margin** or **spread**.

**ALPHAGRAM** The constituent letters of a word arranged in alphabetical sequence, normally applied to seven and eight-letter words. (e.g. AEINORT is the alphagram of OTARINE), used as a study aid.

**ANAMONIC** A short mnemonic phrased used to remember which tiles combine with a **stem** to form a **bonus**.

**BACK HOOK** An extension to the end of a word by one letter to form a new word. (e.g. one back hook to FORGE is T, making FORGET)

**BENJAMIN** An **extension** of a word, normally the first word played, such that it extends to reach a TWS (e.g. at H1 or H15), for instance, extending JOIST to BANJOIST.

**BINGO** Alternative term for **bonus**.

**BLOCKER** or **BLOCKING MOVE** A defensive play, or indeed a defensive player, that closes down openings on the board.

**BLOWOUT** A game won by a large **margin** or **spread**.

**BONUS** A word that uses all seven-letters from the rack and thus earns the player a 50-point bonus. Also **bingo** or **seven**.

**BURN** To use a tile for less than its potential value for strategic reasons, such as taking out a hook or making an opening. Usually applied to an S or a blank.

**CENTRE STAR** or **CENTER STAR**. The middle square on the board, which doubles the value of the first word and which generally has a star design.

**CHALLENGE** What a player says when challenging the validity of an opponent's word. Also, the act of a 'challenge'. A correct challenge results in the word being removed from the board. An incorrect challenge may be penalised depending on the rules being used.

**CHANGE** A player can change any number of letters instead of playing a word providing there are at least seven letters in the bag. The player will normally declare 'Change' and announce the number of letters being changed. Also **exchange**.

**CLOCK** The device used to keep time during the game, usually similar to a chess clock, allowing both players the same amount of time for the game which they can apportion to moves as required.

**COLLINS SCRABBLE WORDS** The current authority for Scrabble in most of the world. Often referred to as just **Collins** or **CSW**.

**CONSOGRAM** Like an **alphagram**, but with the letters broken into vowels and consonants, so OTARINE becomes NRT+AEIO. Some players prefer to organise their racks or study words this

way.

**CONSONANT-HEAVY** A rack of letters that has more than five consonants, or more than four if the consonants are incompatible together.

**COUNTBACK** The process of adjusting scores at the end of a game for unused letters. Depending on the rules, the player who goes out may either add double the face value on the opponent's rack, or take face value while the opponent has face value subtracted.

**DLS** Short for Double Letter Square. Any letter played on this square has its value doubled.

**DOUBLE CHALLENGE** A term used to describe a challenge rule whereby the challenger loses a turn for an incorrect challenge, as in North America.

**DOUBLE-DOUBLE** Any play that extends across two double word squares thus earning four times the value of the word played. Also **four-timer**.

**DUMP** To play off unwanted letters, normally in a risk-free position, in order to sort out a rack imbalance. The word used is called a **dumper**.

**DUPLICATE** Duplicate Scrabble is a variation of the tournament game, played primarily in France, whereby all competitors have the same racks of letters and have to find the highest-scoring play each turn on the same (large display) board. Luck is eliminated but so are large areas of strategic skill.

**DWS** Short for Double Word Square. Any word that covers this square has its total value doubled.

**ENDGAME** This term is usually used to define the stage of the game when all the letters are out of the bag and both players have letters on their racks to play out their final moves. Therefore both players have the means to deduce what the other player has on the rack.

**ENTROPY** A way of describing the propensity for the score to change over the course of the game.

**EQUITY** A way of quantifying the value of a move beyond its score, taking into account the **leave** and the board position.

**EXCHANGE** Same as **change**.

**EXTENSION** Adding tiles to the front or end of an existing play, i.e. turning CHANT into PENCHANT.

**FALSE WORD.** A word that does not appear in the dictionary, a **phoney**.

**FISHING** The action of playing off just one (or sometimes two) tile from a rack in the hope of picking the letter(s) required to make a bonus play. Usually performed when player is holding a blank or a **stem**.

**FLOATER** Any letter on the board that is available to play an eight letter word through. The term is also used for a letter on the board that can only begin or end an eight-letter word.

**FOUR-TIMER** Another term for a **double-double**

**FRONT HOOK** An extension to the beginning of a word by one letter to form a new word. For example, a front hook to SLANDER is I to make ISLANDER.

**GOING OUT** The act of making an **outplay** to conclude the game.

**GOING OVER** Exceeding the time limit – see also **overtime**.

**GOODIES** Another term for the **power tiles**.

**HOLD** A declaration made when you are not sure if your opponent's word is valid and you are considering challenge. A player may not draw when an opponent has called "hold".

**HOOK** Any letter that can be added at the beginning or end of another word to form a new valid word. See **front hook** and **back hook**.

**HOT SPOT** Any place on the board that becomes available for (or a risk of) a high score for a specific letter or letters. These are often TLSs available for playing a letter like the X to make two short words for around 50 points.

**KEEP** Another word used for **leave**.

**LADDER** A term used to describe a succession of short words that start from the centre and build up towards one of the corners, often meaning a very blocked board. Also **stair-step**.

**LANE** A succession of squares not yet played on that would fit a lucrative play such as a bonus.

**LEAVE** The letters left on the rack after a play. Also **keep**.

**MARGIN** The difference between two players' scores at any point in the game. The final spread is recorded at the end of tournament games and is used along with number of wins in determining players' performance. Also **spread**.

**NINE-TIMER** A play that extends across two triple word squares and thus earning nine times the value of the word played. This is also called a **triple-triple**.

**OSPD** A shorthand for the official dictionary used in non-competitive play in North America, replaced by **TWL** (or **OtaCWL**) after recent editions of the OSPD were expurgated to not include words deemed to be offensive.

**OTaCWL** The official word list used in club and tournament play in North America. Also **TWL**.

**OUTPLAY** or **PLAY OUT** A play that concludes the game by one player emptying their rack.

**OVERDRAW** When a player picks too many letters from the bag to replenish his rack then this is an overdraw.

**OVERLAP** A play where a word overlaps another making several other short words in the process. Also **parallel play** or **underlap**.

**OVERTIME** The amount of time a player has exceeded the allocated playing time. Going overtime immediately attracts a 10 point penalty, and a further 10 point penalty for each minute beyond that.

**PARALLEL PLAY** Same as **overlap**.

**PASS** A move in which a player does not play a word and does not change any letters. A player often passes at the end of a game if stuck with unplayable letters whilst the opponent can still play, or to try to force their opponent to empty the bag.

**PHONEY** A word that has remained on the board through not being challenged but is not valid under the word rules. Also referred to as a **false word**.

**POINT PENALTY CHALLENGE.** A rule used in most international tournaments whereby an unsuccessful challenge attracts a point penalty, usually 5 points added onto the challenged play. The play can be per challenge, or per word (where multiple words are challenged simultaneously).

**POWER TILES** The J Q X and Z, the four S's and the two blanks. Also **goodies** or "big ten".

**PRE-ENDGAME.** The part of the game when there are few tiles left in the bag (less than seven, usually).

**PREMIUM SQUARE.** Any square which gives extra value to a letter or entire word.

**Q STICK** – An **endgame** play that involves trapping the opponent with an unplayable Q and collecting 20 points in **countback**. The player caught with the Q tile is sometimes said to have "eaten the Q". Can also be applied to any tile that can be rendered unplayable, i.e. "V stick".

**RACK** Although strictly speaking this is the rack upon which the letters are placed, it has come to also mean the letters that a player holds at any point in the game.

**RACK BALANCING or RACK MANAGEMENT** Maintaining a balance of vowels and consonants on the rack to maximise choice of plays and chances of a bonus word. Typically a balanced rack will consist of three vowels and four consonants.

**RANKING** The position of a tournament player in the ratings table for either the world (WESPA) or a national association.

**RATING** A figure representing a tournament player's ability, derived from tournament play.

**SET-UP** A play that creates a high-scoring possibility with a letter remaining on the rack.

**SEVEN** Another term for a play using all seven tiles, the same as a **bonus**, even if the word created is more than seven letters long.

**SIMULATE** To use a computer program to determine the best play in a board position.

**SINGLE CHALLENGE** A form of the game rules in which unsuccessful challenges to words is met with no penalty. Compare **double challenge** or **point penalty challenge**.

**STAR** The **centre star**.

**STEM** Any group of six (or seven) letters that are common to many seven- (or eight-) letter words and thus form a focus for bonus word study.

**SOWPODS** An acronym derived from the US and UK lexicons in use before 2000 (OSPD + OSW), referring to a lexicon including words that are contained in either. Sometimes used to refer to **COLLINS SCRABBLE WORDS**. Historically also called "double dictionary".

**SPREAD** Another term for **margin**.

**STAIR-STEP** or **STAIRCASE** Same as **ladder**.

**STEM** A set of tiles which forms seven- or eight-letter words with a large number of other letters, such as SATIRE or RETINA.

**THROUGH-PLAY** A play that is played through two or more letters on the board, i.e. turning MEOW into HOMEOWNER.

**TILE TRACKING** The action of keeping track of the letters played, and therefore noting the letters remaining. Most tournament players use a pre-printed sheet of the Scrabble letters to cross off during play.

**TIME PENALTY** The time taken off the score for going **overtime**.

**TIMER** See **clock**.

**TLS** Short for Triple Letter Square. Any letter that covers this square has its value tripled.

**TOURNAMENT TILES** Scrabble tiles with smooth surfaces to eliminate any possibility of accidental (or otherwise) of feeling for blanks. Standard tiles generally have a slightly embossed surface, except for the blanks

**TRIPLE TRIPLE** Another term for a **nine-timer**.

**TURNOVER** The number of letters used in a play. Sometimes the turnover can be a strategic factor of the play.

**TWL** See **OTaCWL**.

**TWS** Short for Triple Word Square. Any word that covers this square has its total value tripled.

**UNDERLAP** An **overlap** or **parallel play**, this term is typically used when the play is beneath the existing word.

**UNSEEN** The tiles not on the player's rack or on the board – they may be in the tile bag, or on the opponent's rack. Also "pool".

**VOWEL CONSONANT RATIO** The balance of vowels to consonants remaining in your leave.

**VOWEL DUMP** Any play or word that consists of mainly vowels in order to resolve a vowel-heavy rack.

**VOWEL-HEAVY** A rack of letters that has five or more vowels.

# appendix

## Rules governing word inclusion in Collins Scrabble Words

The following subsection explains the rules for inclusion of inflexions that the WESPA Dictionary Committee (DC) has used in compiling CSW. It's not essential to be familiar with this but it may be of interest to the curious. It is a little bit technical but plentiful examples should aid understanding.

### Nouns:

There is no question about whether common words such as CHAIR can have a plural and how that plural is formed (CHAIRS) but there is also an abundance of nouns in the source dictionaries where the plural form may not be explicitly shown and not so obvious.

For the Scrabble word list, all singular nouns in the source dictionary are deemed to take a plural form irrespective of how rare, or unlikely, that plural form may be. Most plurals will be formed by adding -S or -ES:

Examples: APTNESSES; CHINAS; COLITISES; MALARIAS; OXYGENS; OZONES

Note that some plural forms are the same as the singular. Most of these are where the source dictionary explicitly shows the plural to be the same as the singular....

Examples: BHAT; HWAN; SHEEP

...or where the noun is singular in definition but looks as if it is an -S plural form:

Example: GENETICS (the study of genes, hence no GENETICES\*); NADORS (thirst); PHYSICS (the science)

Where singular nouns are clearly foreign imported words and no plural is shown in the source dictionary then, if there is evidence in other English-dictionary sources, a foreign plural and/or an English plural may be included.

Example: JEU is allowed because it exists as a main dictionary entry as a stand-alone word. Only JEUX is specified in the dictionary as the plural, so JEUS\* is not allowed.

Example: DI and DEI are both allowed as alternative foreign plurals of the word DEUS

Example: TECTUMS and TECTA are both allowed as plurals of TECTUM

### Verbs:

Any verb will attract the standard verb forms (-S, -ED, -ING) unless the source dictionary shows non-standard forms or states that the verb is used in one tense only.

Example: DEEK is a verb but used in one tense only

Example: UNBE is a verb but has UNBEING and UNBEEN only

Example: POOK is a Scottish verb giving POOKS POOKING POOKIT (but not POOKED\*)

There are plenty of archaic and old-fashioned verbs included in CSW because they are listed in the source dictionary. Standard verb inflections are shown for such words unless the source dictionary shows an historic inflection.

Example: VOR is a Shakespearean word conjectured to be dialect for WARN. The inflections VORS VORRED VORRING are included.

Example: PRYS is an old spelling of PRICE and PRIZE. The inflections PRYSES PRYSED PRYSING are included. Note PRYSES is also the plural of the quite different word, PRYSE.

Example: CLEPE and CLEEP are archaic verbs. The source dictionary explicitly shows past tenses to be YCLEPT or YCLEPED but nothing is shown for the past participles. So CLEPED and CLEEPED are also included along with CLEPES CLEEPS CLEPING CLEEPING.

### **Adjectives:**

Some, but not all adjectives can take comparative forms in –ER and a superlative form in –EST (e.g. ROUGH ROUGHER ROUGHEST). The DC has applied some rules for allowing such forms. These are as follows:

The comparative and superlative (comps&sup) forms are explicitly shown in the source dictionary.

Example: SHY SHYER SHYEST SHIER SHIEST

The adjective is not obsolete and not an obsolete spelling.

Examples: OUGHLY (=UGLY) has no comp&sup. LAESIE (=LAZY) has no comp&sup

The adjective is one syllable and the comps&sup are supported in an unabridged dictionary such as Webster's 3<sup>rd</sup> International.

Examples: CHOICE CHOICER CHOICEST; DWARF DWARFER DWARFEST

The adjective is one syllable and the comps&sup forms are recommended by the editor of the source dictionary being used (this has often been the case regarding Scottish adjectives)

Examples: DREICH DREICHER DREICHEST; SKEIGH SKEIGHER SKEIGHST

The adjective has two syllables with the second being an –IE or –Y and a definition (explicit or implied) that lends itself to be compared (i.e. meaning –like, somewhat, abounding in, –ish). The DC has decided that the euphony of such adjectives lends themselves to be compared with –IER and –IEST forms irrespective of whether there is any support for such forms in unabridged dictionaries.

Examples: LAWNY LAWNIER LAWNIEST; OURIE OURIER OURIEST; VEILY VEILIER VEILIEST;

### **Interjections:**

Interjections are allowed as words but they only take a plural form or verbal forms if they are listed as a noun and/or verb.

Example: EH is also a verb so EHS EHED EHING are included

Example: UGH is also a noun so plural UGHS is included.

Example: AHA is only an interjection so has no inflections.

### **Adverbs:**

Only those adverbs that are explicitly listed in the source dictionary are allowed. There will be plenty of reasonable sounding adverbs that are NOT included but where the corresponding adjective is allowed. This can be a difficult area for newer players to get familiar with. Generally, any adverb that feels very natural and is likely to be reasonably common in usage can be expected to be allowed.

Example: All these are included GREENLY NERVILY POROUSLY RABIDLY TIREDLY

Example: These are NOT included: BROWNLy FRAUGHTLY HAIRILY MOULDILY SCAREDLY

Comparative and superlative forms of adverbs are very rare in usage and so only those explicitly listed in the source dictionary are allowed:

Example: FITLY FITLIER FITLIEST

Example: NEARLY NEARLIER NEARLIEST

### **Phrasal Words:**

English words that only exist as part of an English phrase in the source dictionary are allowed

Example: BUSMAN is allowed from the phrase BUSMAN's HOLIDAY

Example: FOLIC is allowed from the phrase FOLIC ACID

As a consequence there may also be some plurals allowed (e.g. BUSMEN) or where the phrase is of the two word form x y where x describes a type of y

Example: PINGPONG and PINGPONGS are allowed from the phrase AERIAL PINGPONG

There are some words that only behave as nouns in phrasal use, which is why a plural form is in the word list.

Example: CRUNCHINGS is only allowed because the phrase NUMBER CRUNCHING can be pluralised.

Example: JUMPINGS is only allowed because the phrases BASE JUMPING and BUNJY JUMPING can be pluralised

Foreign words that *only* exist as a part of a phrase are not allowed.

Example: SUEY is disallowed from CHOP SUEY

Example: QUO is disallowed from STATUS QUO

Example: GRENZ is disallowed from GRENZ RAYS

### **North-America TWL/Rest-of-World Scrabble word list standardization**

The DC has taken some steps to ensure that there is a consistent approach when the North American TWL words were included. For example, in the main sources the verb endings of –IZE, –ISE are interchangeable but some –IZE verbs unique to TWL do not have an –ISE shown.

Examples: TWL has EROTIZE but not EROTISE. EROTISE and inflections have been included  
TWL has ODORIZE but not ODORISE. ODORISE and inflections have been included.

The DC has corrected this for the sake of consistency. Similarly, the approach to comp&sup of adjectives has been applied to adjectives unique to TWL where such forms have not been included in TWL.

Examples: TWL has HAYEY but no comp&sup. HAYIER and HAYIEST have been included  
TWL has MARVY but no comp&sup. MARVIER and MARVIEST have been included

These are the only two areas where the DC felt it worthwhile tweaking the TWL content for the sake of greater consistency across the official word list.



consonants) or the lurking Q that nobody wanted. Some cunning tacticians have been known to hide blanks in this way for future use, or to replace a tile \*with itself\* to confuse the opposition.

Again, among good tournament players with reasonable knowledge of 7s and 8s, it isn't uncommon to witness boards filled with a criss-cross of bonus plays, and at least a couple of games have been recorded which are \*solely\* made up of bonuses as far as is possible with 100 tiles. Average scores within If Only are appreciably higher than in normal Scrabble, but because both players are using up tiles at a higher rate, they rarely approach the heights of Clabbers.

## **Anagrams**

Not so much a variant of Scrabble, but a wordgame often enjoyed by groups of Scrabble players utilising one or more sets of tiles without a board.

All of the tiles are turned face down and pooled, with blanks being removed. Tiles are then distributed approximately evenly to each person playing, remaining face-down all the time. Players then take it in turns to turn one of their tiles face up in the centre of the table. Once the number of upturned tiles reaches 5 or more, players are able to shout out any word which they are able to make from them (of a minimum of 5 letters in length.) The player shouting a valid word first 'wins' that word and places it on the table in front of him/her. Play continues as before, with one tile at a time being turned over in the centre of the table, but from this point on players can either make words from the pool in the middle, or, by adding letters from the pool to a previously 'won' word in front of themselves or other players. If the letters are added to a word in front of one of their opponents, the player declaring the new anagram first 'wins' the word, and so on.

Scoring in Anagrams is straightforward. Once all the tiles have been used and no more plays are possible, players score the square of the length of each word they have won. e.g. 25 for 5 letters, 64 for 8 and so on.

This scoring system means that it is commonplace for the strongest players to plan well ahead for impressive steals. Memorable plays include such beauties as MIDGE + OOY = GEOMYOID, MACHINE -> ACHAENIUM -> NAUMACHIAE and the majestic PLASTERING ->ANTIGROPELOS!

## **Duplicate Scrabble**

Duplicate Scrabble, as the name suggests, is a variant of the head-to-head game which involves all players using the same tiles on the same board position. On each move all participants are given the same set of 7 letters and a defined time limit in which to find the \*highest scoring\* play, regardless of traditional match play considerations such as rack balance or tactical positioning. At the end of that time, every player must declare the highest score they have found.

Players score according to their own play, however it is only the highest move out of all those declared which is placed on \*everyone's\* boards/a single master board regardless of whether it was their move of choice. e.g. In a room of 10 players, 2 find ANERGIA for 70, 6 find GRAIN for 16 and 2 find AGAIN for 14. All players place ANERGIA on their own board/the master board, but only 2 score 70, 6 score 16 and the remaining 2 score 14. The game continues like this until all tiles have been exhausted, and the player with the highest aggregate score wins.

It should be noted that although in this book we refer to Duplicate as a variant, in some countries (most notably France) it is seen as the main form of the game removing the luck element inherent with "standard" Scrabble. Players more familiar with match play tend to prefer the excitement and subtleties of rack balance/strategic placement as well as the volatility which means no matter how strong a player may be there is always a slim chance of an upset.

## Two and Three Letter Words

Complete lists of the 2s and 3s are provided here. Definitions are unimportant but are included to aid learning. Learning how to use the search function in Zyzzyva to generate your own word lists is essential; these lists are provided for quick reference only.

### Two-letter words

AA	<i>n</i> a type of volcanic rock > AAS
AB	<i>n</i> short for abdominal muscle > ABS
AD	<i>n</i> short for advertisement > ADS
AE	<i>adj</i> a Scots word for one
AG	<i>adj</i> agricultural $\alpha$ <i>n</i> agriculture > AGS
AH	<i>int</i> an interjection expressing surprise, joy etc $\alpha$ <i>vb</i> to say ah > AHS, AHING, AHED
AI	<i>n</i> the three-toed sloth > AIS
AL	<i>n</i> an E. Indian shrub > ALS
AM	<i>vb</i> 1 <sup>st</sup> person present tense of BE
AN	<i>adj</i> the indefinite article $\alpha$ <i>n</i> a dialect form of if, an additional consideration, as in ifs and ans > ANS
AR	<i>n</i> the letter r > ARS
AS	<i>adv</i> in whatever way $\alpha$ <i>conj</i> because, since $\alpha$ <i>n</i> a Norse god > AESIR; a gravel ridge or kame > ASAR; a Roman coin > ASSES
AT	<i>prep</i> a preposition denoting position in space or time $\alpha$ <i>n</i> a monetary unit of Laos > ATS
AW	<i>int</i> an interjection expressing disappointment, sympathy etc $\alpha$ <i>adj</i> all
AX	<i>n</i> an axe > AXES
AY	<i>int</i> yes $\alpha$ <i>n</i> an affirmative vote > AYS
BA	<i>n</i> in ancient Egyptian religion, the soul > BAS
BE	<i>vb</i> to exist > AM, (obs.) ART, IS, ARE, BEING, WAS, (obs.) WAST, (obs.) WERT, WERE, BEEN
BI	<i>n</i> short for bisexual > BIS
BO	<i>int</i> an exclamation used to startle someone $\alpha$ <i>n</i> a fellow; pal, buddy > BOS
BY	<i>prep</i> indicating the doer of an action, nearness, movement past, time before or during which, etc $\alpha$ <i>adv</i> near $\alpha$ <i>n</i> a pass to the next round (of a competition, etc.) > BYS
CH	<i>pron</i> a dialect form of I
DA	<i>n</i> a heavy Burmese knife > DAS
DE	<i>prep</i> from (as used in names)
DI	<i>pl</i> < DEUS, a god
DO	<i>vb</i> to perform > DOES, (obs.) DOEST, (obs.) DOST, (obs.) DOETH, (obs.) DOTH, (obs.) DOEN, DOING, DID, (obs.) DIDST, DONE $\alpha$ <i>n</i> a party, a celebration > DOS
EA	<i>n</i> an old word for river > EAS
ED	<i>n</i> short for education > EDS
EE	<i>n</i> an old word for eye > EEN
EF	<i>n</i> the letter f > EFS
EH	<i>int</i> an interjection expressing enquiry $\alpha$ <i>vb</i> to say 'eh' > EHS, EHING, EHED
EL	<i>n</i> the letter L; an elevated railroad > ELS
EM	<i>n</i> a unit of measurement in printing, the square of a body of any size of type > EMS
EN	<i>n</i> a unit of measurement in printing, half the width of an em > ENS
ER	<i>int</i> an interjection expressing hesitation
ES	<i>n</i> the letter S > ESES
ET	<i>vb</i> past tense of EAT, to consume by mouth
EX	<i>prep</i> not including $\alpha$ <i>n</i> a former wife, husband etc $\alpha$ <i>vb</i> to cut out, delete > EXES, EXING, EXED
FA	<i>n</i> a musical note, as in sol-fa > FAS
FE	<i>n</i> a Hebrew letter > FES
FY	<i>int</i> an interjection expressing reproach
GI	<i>n</i> a loose-fitting white suit worn in judo, karate, and other martial arts > GIS
GO	<i>n</i> a turn; a Japanese board game > GOS $\alpha$ <i>vb</i> to pass from one place to another > GOES, (obs.) GOEST, (obs.) GOETH, GOING, WENT, GONE
GU	<i>n</i> a kind of violin formerly used in the Shetlands > GUS
HA	<i>int</i> an interjection expressing eg surprise
HE	<i>pron</i> the masculine singular pronoun $\alpha$ <i>n</i> a male person or animal > HES; $\alpha$ <i>int</i> an exclamation expressing amusement
HI	<i>int</i> an interjection calling attention

HM *int* an interjection expressing thoughtful consideration

HO *int* an interjection calling attention ▫ *n* cessation ▫ *vb* to stop > HOS, HOING, HOED

ID *n* the mind's instinctive unconscious energies; a fish of the carp family > IDS

IF *conj* on condition that ▫ *n* a condition > IFS

IN *prep* indicating position inside, state or situation, etc ▫ *adv* indicating position inside, entry into, etc ▫ *adj* fashionable ▫ *n* a way of approaching or befriending a person ▫ *vb* to take in > INS, INNING, INNED

IO *int* an interjection expressing joy, triumph, grief ▫ *n* a cry of 'io' > IOS

IS *vb* third person present tense of BE, to exist

IT *pron* the neuter of he she him or her ▫ *n* a player whose turn it is to catch the others in children's games

JA *int* a S. African word for yes

JO *n* a Scots word for loved one > JOES

KA *n* in ancient Egypt, an attendant spirit supposedly dwelling as a vital force in a man or statue ▫ *vb* to serve, help > KAS, KAING, KAED

KI *n* the spirit of Japanese martial art > KIS

KO *n* a Maori digging-stick > KOS

KY *pl* cattle

LA *n* a musical note > LAS

LI *n* a Chinese unit of distance > LIS

LO *int* an interjection meaning see, look

MA *n* colloquial for mother > MAS

ME *pron* the objective first person pronoun > *n* a musical note > MES

MI *n* a musical note > MIS

MM *int* an interjection expressing agreement or enjoyment

MO *n* a moment > MOS

MU *n* a letter of the Greek alphabet > MUS

MY *adj* of or belonging to me; ▫ *int* an exclamation of surprise or awe

NA *adv* no, not at all

NE *adv* not ▫ *conj* nor

NO *int* expressing negation ▫ *adj* not any, not a ▫ *adv* expressing negation ▫ *n* a no vote > NOS or NOES

NU *n* a letter of the Greek alphabet > NUS

NY *adj* near ▫ *vb* to approach > NYES, NYING, NYED

OB *n* an objection > OBS

OD *n* a hypothetical force; an old word for god, often used as a mild oath > ODS

OE *n* a grandchild > OES

OF *prep* belonging to

OH *int* an interjection ▫ *vb* to say oh > OHS, OHING, OHED

OI *int* an interjection used to express attention ▫ *n* a New Zealand bird, the grey-faced petrel > OIS

OM *n* an intoned Hindu sacred symbol > OMS

ON *adv* in contact with the upper surface of ▫ *adv* in operation ▫ *adj* operating ▫ *n* the side of the field on which the batter stands ▫ *vb* to go on with, to put up with > ONS, ONNING, ONNED

OO *n* a Scots word for wool > OOS

OP *n* short for operation > OPS

OR *conj* a conjunction linking alternatives ▫ *adj* of the metal gold ▫ *n* the heraldic tincture gold > ORS

OS *n* a bone > OSSA; a mouthlike opening > ORA; an esker > OSAR

OU *adj* an interjection expressing concession ▫ *n* a bloke > OUS or OUENS

OW *int* an interjection expressing pain

OX *n* a bovine animal > OXEN; a clumsy person > OXES

OY *n* a grandchild > OYS

PA *n* a child's word for father; a Maori hill fort > PAS

PE *n* a Hebrew letter > PES

PI *n* a letter in the Greek alphabet > PIS ▫ *vb* to mix type indiscriminately > PIS, PIING, PIED

PO *n* chamberpot > POS

QI *n* the physical life-force postulated by certain Chinese philosophers > QIS

RE *prep* concerning ▫ *n* (in tonic sol-fa) the second degree of any major scale > RES

SH *int* an interjection requesting silence

SI *n* an earlier form of ti, a musical note > SIS

SO *adj* in such a way, to such a degree; ▫ *int* an exclamation of surprise, triumph, or realization ▫ *n* (in tonic sol-fa) the fifth degree of any major scale > SOS

ST *int* an interjection requesting silence

TA *int* an interjection expressing thanks ▫ *n* a thank-you > TAS

TE *n* the seventh degree of any major scale > TES

TI *n* a musical note; a small Pacific tree > TIS  
 TO *prep* in the direction of, towards  $\bowtie$  *adv* a closed position  
 UG *vb* to dread, loathe > UGS, UGGING, UGGED  
 UH *int* an interjection expressing surprise  
 UM *int* an interjection expressing doubt or hesitation  $\bowtie$  *vb* to express doubt or hesitation > UMS, UMMING, UMMED  
 UN *pron* a spelling of 'one' intended to reflect a dialectal or informal pronunciation > UNS  
 UP *adv* towards a higher place  $\bowtie$  *adj* of a high or higher position  $\bowtie$  *vb* to move up > UPS, UPPING, UPPED  
 UR *int* an interjection expressing hesitation  
 US *pron* the objective case of the first person plural pronoun  
 UT *n* a musical note > UTS  
 WE *pron* the subjective case of the first person plural pronoun  
 WO *n* an old form of woe > WOS  
 XI *n* a letter in the Greek alphabet > XIS  
 XU *n* a Vietnamese monetary unit > XU  
 YA *pron* an American form of you  
 YE *pron* an old form of you  $\bowtie$  *adj* an old form of the  
 YO *int* an interjection calling for effort or attention  
 YU *n* a precious jade > YUS  
 ZA *n* short for pizza > ZAS  
 ZO *n* a cross between a yak and a cow > ZOS

## Three-letter words

AAH	<i>int</i> an interjection expressing surprise $\alpha$ <i>vb</i> to express surprise > AAHS, AAHING, AAHED
AAL	<i>n</i> an E. Indian shrub > AALS
AAS	<i>pl</i> < AA, a type of lava
ABA	<i>n</i> a Syrian cloth of goat's or camel's hair; an outer garment made from this > ABAS
ABB	<i>n</i> a textile yarn > ABBS
ABO	<i>n</i> short for an aboriginal > ABOS
ABS	<i>pl</i> < AB, an abdominal muscle
ABY	<i>vb</i> to pay the penalty for > ABYS, ABYING, ABOUGHT
ACE	<i>n</i> the one in cards $\alpha$ <i>vb</i> to play a winning serve in tennis > ACES, ACING, ACED
ACH	<i>int</i> an interjection expressing regret or impatience
ACT	<i>vb</i> to do in a specified way > ACTS, ACTING, ACTED
ADD	<i>vb</i> to make an addition > ADDS, ADDED, ADDING
ADO	<i>n</i> bustle or fuss > ADOS
ADS	<i>pl</i> < AD, an advertisement
ADZ	<i>n</i> a cutting tool with an arched blade set at right angles to the handle > ADZES
AFF	<i>adv</i> a Scots word for off
AFT	<i>adv</i> behind; near the stern of a vessel, etc
AGA	<i>n</i> a Turkish commander > AGAS
AGE	<i>n</i> duration of life $\alpha$ <i>vb</i> to grow old > AGES, AGING or AGEING, AGED
AGO	<i>adv</i> past; since
AGS	<i>pl</i> < AG, agriculture
AHA	<i>int</i> an interjection expressing exultation or pleasure
AHI	<i>n</i> the yellowfin tuna > AHIS
AHS	<i>vb</i> 3 <sup>rd</sup> person singular of AH, to say ah
AIA	<i>n</i> an Indian nurse-maid > AIAS
AID	<i>n</i> help, assistance $\alpha$ <i>vb</i> to help or assist > AIDS, AIDING, AIDED
AIL	<i>vb</i> to be indisposed > AILS, AILING, AILED
AIM	<i>vb</i> to point or direct > AIMS, AIMING, AIMED
AIN	<i>n</i> a letter of the Hebrew alphabet > AINS
AIR	<i>n</i> the mixture of gases breathed by people and animals $\alpha$ <i>vb</i> to make known publicly > AIRS, AIRING, AIRED
AIS	<i>pl</i> < AI, a kind of sloth
AIT	<i>n</i> a small island in a river > AITS
AJI	<i>n</i> a spicy pepper > AJIS
AKA	<i>n</i> a New Zealand vine > AKAS
AKE	<i>vb</i> an old spelling of ache > AKES, AKING, AKED
ALA	<i>n</i> an outgrowth on a fruit > ALAE
ALB	<i>n</i> a priest's long, white vestment > ALBS
ALE	<i>n</i> a kind of beer, made without using hops as a flavouring > ALES
ALF	<i>n</i> an uncultivated Australian > ALFS
ALL	<i>adj</i> the whole quantity of $\alpha$ <i>adv</i> wholly $\alpha$ <i>n</i> the whole; everything and everybody > ALLS
ALP	<i>n</i> a mountain > ALPS
ALS	<i>pl</i> < AL, an E. Indian shrub
ALT	<i>n</i> a high tone in a voice or instrument > ALTS
ALU	<i>n</i> in India, a potato > ALUS
AMA	<i>n</i> a native maidservant or child's nurse, especially a wet nurse > AMAS
AME	<i>n</i> a French word for soul > AMES
AMI	<i>n</i> a French word for friend > AMIS
AMP	<i>n</i> short for ampere or amplifier $\alpha$ <i>vb</i> to excite > AMPS, AMPING, AMPED
AMU	<i>n</i> a unit of atomic mass > AMUS
ANA	<i>n</i> a collection of someone's table-talk > ANAS
AND	<i>conj</i> a conjunction indicating addition $\alpha$ <i>n</i> the symbol ampersand; something added > ANDS
ANE	<i>n</i> one > ANES
ANI	<i>n</i> a tropical American bird > ANIS
ANN	<i>n</i> the half-year's stipend payable to a minister's wife on his death > ANNS
ANS	<i>pl</i> < AN, as in ifs and ans, things that might have happened, but which did not
ANT	<i>n</i> a small industrious insect > ANTS
ANY	<i>adj</i> some; whichever, no matter which
APE	<i>n</i> an anthropoid primate $\alpha$ <i>vb</i> to imitate > APES, APING, APED
APO	<i>n</i> short for apolipoprotein, a type of protein > APOS

APP *n* short for application program > APPS  
 APT *adj* suited to > APTER, APTEST, APTLY  $\pi$  *vb* an old form of adapt > APTS, APTING, APTED  
 ARB *n* short for arbitrageur, a stocks and shares shyster > ARBS  
 ARC *n* a part of the circumference of a circle or other curve  $\pi$  *vb* to form an arc > ARCS, ARCING or ARCKING, ARCED or ARCKED  
 ARD *n* a kind of primitive plough > ARDS  
 ARE *n* a unit of metric land measure > ARES  
 ARF *n* a barking sound > ARFS  
 ARK *n* a chest or coffer  $\pi$  *vb* to place in an ark > ARKS, ARKING, ARKED  
 ARM *n* a limb; a weapon  $\pi$  *vb* to provide with weapons > ARMS, ARMING, ARMED  
 ARS *pl* < AR, the letter R  
 ART *n* the creation of works of beauty; a human skill > ARTS  
 ARY *adj* any  
 ASH *n* the dust or remains of anything burnt  $\pi$  *vb* to convert something into ash > ASHES, ASHING, ASHED  
 ASK *vb* to request, inquire or invite > ASKS, ASKING, ASKED  
 ASP *n* a venomous snake > ASPS  
 ASS *n* a longhaired animal like a small horse; a stupid person > ASSES  
 ATE *n* reckless ambition that drives one to ruin > ATES  
 ATS *pl* < AT, monetary unit of Laos  
 ATT *n* a monetary unit of Laos > ATT  
 AUA *n* the yellow-eye mullet > AUAS  
 AUE *int* an exclamation of pain, distress or astonishment  
 AUF *n* an elf's child > AUFS  
 AUK *n* a type of sea-bird > AUKS  
 AVA *n* an aromatic plant of the pepper family; a narcotic drink prepared from its root and stem > AVAS  
 AVE *n* a recitation of the prayer to the Virgin Mary > AVES  
 AVO *n* a monetary unit of Macao > AVOS  
 AWA *adv* a Scots form of away  
 AWE *n* reverential wonder or fear  $\pi$  *vb* to strike with awe > AWES, AWING or AWEING, AWED  
 AWK *n* a computer-programming language used for data processing > AWKS  
 AWL *n* a pointed tool for boring > AWLS  
 AWN *n* a beard on grass  $\pi$  *vb* to shelter with an awning > AWNS, AWNED, AWNING  
 AXE *n* a tool for chopping  $\pi$  *vb* to chop or cut down > AXES, AXING, AXED  
 AYE *int* yes  $\pi$  *n* an affirmative vote > AYES  
 AYS *pl* < AY, an affirmative vote  
 AYU *n* a small edible Japanese fish > AYUS  
 AZO *adj* of compounds, containing nitrogen, as in azo dye  
 BAA *vb* to bleat as a sheep > BAAS, BAAING, BAAED  
 BAC *n* short for baccalaureate > BACS  
 BAD *adj* evil, wicked > BADDER, BADDEST, BADLY  $\pi$  *n* something evil > BADS  
 BAG *n* a receptacle for containing something  $\pi$  *vb* to put into a bag > BAGS, BAGGING, BAGGED  
 BAH *int* an interjection expressing disgust or contempt  
 BAL *n* short for balmoral, a type of Scots bonnet or boot > BALS  
 BAM *vb* to hoax or cheat > BAMS, BAMMING, BAMMED  
 BAN *n* a monetary unit of Romania > BANI  $\pi$  *vb* to forbid or prohibit > BANS, BANNING, BANNED  
 BAP *n* a large, flat breakfast roll > BAPS  
 BAR *n* a rod, a barrier  $\pi$  *vb* to obstruct or prevent > BARS, BARRING, BARRED  
 BAS *pl* < BA, the soul in ancient Egyptian religion  
 BAT *n* a flying mammal; an implement for striking a ball  $\pi$  *vb* to strike with a bat > BATS, BATTING, BATTED  
 BAY *n* a wide semicircular indentation of a coastline  $\pi$  *vb* to bark or howl > BAYS, BAYING, BAYED  
 BED *n* a place to sleep on  $\pi$  *vb* to put to bed > BEDS, BEDDING, BEDDED  
 BEE *n* an insect that makes honey > BEES  
 BEG *vb* to ask for > BEGS, BEGGING, BEGGED  
 BEL *n* a measure of noise > BELS  
 BEN *n* a Scots word for a mountain > BENS  
 BES *n* a letter of the Hebrew alphabet > BESES  
 BET *n* a wager  $\pi$  *vb* to wager > BETS, BETTING, BET or BETTED  
 BEY *n* a Turkish governor > BEYS  
 BEZ *n* the second tine of a deer's horn > BEZES  
 BIB *n* a cloth or plastic shield put under a young child's chin  $\pi$  *vb* to tipple > BIBS, BIBBING, BIBBED  
 BID *n* an offer  $\pi$  *vb* to make an offer > BIDS, BIDDING, BID; to command > BIDS, BIDDING, BIDDEN, BID, BADE

**BIG** *adj* sizeable > BIGGER, BIGGEST, BIGLY ▫ *vb* a Scots word for build > BIGS, BIGGING, BIGGED  
**BIN** *n* a large container ▫ *vb* to place into a bin > BINS, BINNING, BINNED  
**BIO** *n* short for biography > BIOS  
**BIS** *adv* twice; in music, a direction that a piece is to be repeated  
**BIT** *n* a small piece ▫ *vb* to curb or restrain > BITS, BITTING, BITTED  
**BIZ** *n* short for business > BIZZES  
**BOA** *n* a large constricting snake > BOAS  
**BOB** *n* a short jerking motion ▫ *vb* to move quickly up and down > BOBS, BOBBING, BOBBED  
**BOD** *n* colloquial for person > BODS  
**BOG** *n* a marsh ▫ *vb* to sink into a bog > BOGS, BOGGING, BOGGED  
**BOH** *int* an exclamation used to startle someone > BOHS  
**BOI** *n* a lesbian who adopts a boyish appearance or manners > BOIS  
**BOK** *n* a goat or antelope > BOKS  
**BON** *adj* a French word for good  
**BOO** *int* an interjection expressing disapproval or contempt ▫ *n* a sound of disapproval or contempt ▫ *vb* to make such a sound > BOOS, BOOING, BOOED  
**BOP** *vb* to dance to pop music > BOPS, BOPPING, BOPPED  
**BOR** *n* an East Anglian form of address meaning neighbour > BORS  
**BOS** *pl* < BO, a term of address  
**BOT** *n* the maggot of a botfly ▫ *vb* to cadge > BOTS, BOTTING, BOTTED  
**BOW** *n* a bending of neck or body in greeting ▫ *vb* to bend or incline downwards > BOWS, BOWING, BOWED  
**BOX** *n* a case or receptacle (usually with four sides and a lid) for holding anything ▫ *vb* to put into a box > BOXES, BOXING, BOXED  
**BOY** *n* a male child ▫ *vb* in Shakespeare, to play (a female part) as a boy > BOYS, BOYING, BOYED  
**BR** *n* short for brassiere > BRAS  
**BRO** *n* a place for which one feels a strong affinity > BROS  
**BRR** *int* an interjection expressing a feeling of cold  
**BRU** *n* a S. African word for friend > BRUS  
**BUB** *n* a boy > BUBS  
**BUD** *n* a rudimentary shoot of a plant; a flower while still not opened ▫ *vb* to produce buds > BUDS, BUDDING, BUDDING  
**BUG** *n* a name applied loosely to certain insects ▫ *vb* to annoy > BUGS, BUGGING, BUGGED  
**BUM** *adj* wrong, dud > BUMMER, BUMMEST ▫ *n* a tramp or sponger ▫ *vb* to cadge > BUMS, BUMMING, BUMMED  
**BUN** *n* a kind of sweet roll or cake > BUNS  
**BUR** *n* a continual humming sound; a prickly fruit ▫ *vb* to speak with a bur > BURS, BIRRING, BURRED  
**BUS** *n* a road vehicle for transporting a considerable number of passengers ▫ *vb* to travel or transport by bus > BUSES or BUSSES, BUSING or BUSSING, BUSED or BUSSED  
**BUT** *conj* on the other hand ▫ *n* an objection ▫ *vb* to put forward as an objection > BUTS, BUTTING, BUTTED  
**BUY** *vb* to purchase > BUYS, BUYING, BOUGHT, BOUGHTEN  
**BYE** *n* a pass to the next round (of a competition, etc.) > BYES  
**BYS** *pl* < BY, a bye, a pass to the next round of a competition  
**CAA** *vb* to call > CAAS, CAAING, CAAED  
**CAB** *n* a taxicab ▫ *vb* to travel by taxi > CABS, CABBING, CABBED  
**CAD** *n* a dishonourable > CADS  
**CAF** *n* short for cafeteria > CAFS  
**CAG** *n* short for cagoule > CAGS  
**CAL** *adj* short for calorie  
**CAM** *n* an irregular projection on a revolving shaft or rotating cylinder ▫ *vb* to whiten with camstone > CAMS, CAMMING, CAMMED  
**CAN** *n* a container of tin-plate ▫ *vb* to store in such a container > CANS, CANNING, CANNED; to be able > CAN, COULD, COULDST, COULDEST  
**CAP** *n* a flat brimless hat ▫ *vb* to put a cap on something > CAPS, CAPPING, CAPPED  
**CAR** *n* a self-propelled wheeled vehicle > CARS  
**CAT** *n* a carnivore of the genus *Felix* ▫ *vb* to vomit > CATS, CATTING, CATTED  
**CAW** *n* the cry of a crow ▫ *vb* to cry as a crow > CAWS, CAWING, CAWED  
**CAY** *n* a small low island of coral, sand etc > CAYS  
**CAZ** *adj* colloquial for casual  
**CEE** *n* the letter C > CEES  
**CEL** *n* short for celluloid > CELS  
**CEP** *n* a kind of edible mushroom > CEPS  
**CHA** *n* a colloquial word for tea > CHAS

CHE *pron* a dialect form of I

CHI *n* the twenty-second letter of the Greek alphabet > CHIS

CID *n* a chief, captain or hero > CIDS

CIG *n* cigarette > CIGS

CIS *adj* having certain atoms on the same side of the molecule

CIT *n* a contemptuous term for one who is not a gentleman > CITS

CLY *vb* to seize or steal > CLIES, CLYING, CLIED

COB *n* a male swan  $\pi$  *vb* to strike > COBS, COBBING, COBBED

COD *n* a kind of food fish  $\pi$  *vb* to hoax or make fun of > CODS, CODDING, CODDED

COG *n* a projection, eg on a toothed wheel  $\pi$  *vb* to furnish with cogs; to cheat at dice > COGS, COGGING, COGGED

COL *n* a pass in a mountain range > COLS

CON *n* a trick or swindle  $\pi$  *vb* to trick, or persuade by dishonest means > CONS, CONNING, CONNED; an old word for to know, study > CONS, CONNING, COND, (archaic) YCOND

COO *vb* to make a sound like a dove > COOS, COOING, COOED

COP *n* a policeman  $\pi$  *vb* to capture > COPS, COPPING, COPPED

COR *n* a Hebrew measure > CORS

COS *n* a crisp, long-leaved lettuce > COSES

COT *n* a small bed for a young child > COTS  $\pi$  *vb* to entangle > COTS, COTTING, COTTED

COW *n* the female of bovine and some other animals > COWS, KINE, KY, KYE  $\pi$  *vb* to subdue > COWS, COWING, COWED

COX *n* coxswain  $\pi$  *vb* to steer a rowing boat > COXES, COXING, COXED

COY *adj* modest, bashful > COYER, COYEST, COYLY  $\pi$  *vb* an old word meaning to affect coyness > COYS, COYING, COYED

COZ *n* colloquial for cousin > COZZES

CRU *n* a vineyard > CRUS

CRY *n* a sound of pain, grief etc.  $\pi$  *vb* to utter a sound of pain or grief > CRIES, CRYING, CRIED

CUB *n* the young of certain carnivorous animals  $\pi$  *vb* to produce cubs > CUBS, CUBBING, CUBBED

CUD *n* food chewed again by a ruminating animal > CUDS

CUE *n* the last words of an actor's speech serving as a signal to the next speaker to begin  $\pi$  *vb* to give a cue as a signal > CUES, CUIING or CUEING, CUED

CUM *prep* with the addition of  $\pi$  *v* to ejaculate sperm > CUMS, CUMMING, CUMMED

CUP *n* a drinking vessel, roughly hemispherical, usually with one handle  $\pi$  *vb* to form into a cup shape > CUPS, CUPPING, CUPPED

CUR *n* a worthless mongrel dog > CURS

CUT *n* an incision; a reduction  $\pi$  *vb* to make an incision in; to reduce > CUTS, CUTTING, CUT

CUZ *n* colloquial for cousin > CUZZES

CWM *n* a Welsh word for a valley > CWMS

DAB *n* a light touch  $\pi$  *vb* to touch or press gently > DABS, DABBING, DABBED

DAD *n* colloquial for father  $\pi$  *vb* to thump > DADS, DADDING, DADDED

DAE *vb* a Scots word for do > DAES, DAEING, DONE, DID

DAG *n* a tuft of sheep's wool  $\pi$  *vb* to cut the dags off sheep > DAGS, DAGGING, DAGGED

DAH *n* a Burmese knife > DAHS

DAK *n* in India, the mail or post > DAKS

DAL *n* a kind of Indian edible pea > DALS

DAM *n* an embankment to restrain water  $\pi$  *vb* to restrain water with an embankment or bank > DAMS, DAMMING, DAMMED

DAN *n* a level of efficiency in Japanese combative sports > DANS

DAP *vb* to dip bait gently into the water when fishing > DAPS, DAPPING, DAPPED

DAS *pl* < DA, a kind of Burmese knife

DAW *n* a bird of the crow family  $\pi$  *vb* to dawn > DAWS, DAWING, DAWED, DAWEN

DAY *n* the time when it is light > DAYS

DEB *n* short for debutante > DEBS

DEE *n* the letter D  $\pi$  *vb* a substitute for damn > DEES, DEEING, DEED

DEF *adj* excellent, brilliant > DEFFER, DEFFEST, DEFFLY

DEG *vb* to water (eg a plant) > DEGS, DEGGING, DEGGED

DEI *pl* < DEUS, god

DEL *n* a mathematical symbol, aka nabla > DELS

DEN *n* the hollow lair of a wild animal  $\pi$  *vb* to retire to a den > DENS, DENNING, DENNED

DEP *n* a convenience store > DEPS

DEV *n* a god; a good spirit > DEVS

DEW *n* moisture deposited from the air on cooling  $\pi$  *vb* to moisten as with dew > DEWS, DEWING, DEWED

DEX *n* a pill containing Dexedrine, a sulphate used as a stimulant > DEXES  
 DEY *n* formerly, the pasha of Algiers > DEYS  
 DIB *n* one of the small bones of a sheep's leg  $\pi$  *vb* to dip bait gently into the water when fishing > DIBS, DIBBING, DIBBED  
 DID *vb* past tense of DO, to act  
 DIE *n* a shaped block used to shape metal > DIES; a dice > DICE  $\pi$  *vb* to depart from life > DIES, DYING, DIED; to cut or shape with a die > DIES, DIEING, DIED  
 DIF *n* colloquial for difference > DIFS  
 DIG *n* an excavation  $\pi$  *vb* to make a hole, excavate > DIGS, DIGGING, DIGGED or DUG  
 DIM *adj* not bright > DIMMER, DIMMEST, DIMLY  $\pi$  *vb* to make dim > DIMS, DIMMING, DIMMED  
 DIN *n* a loud continued jarring noise  $\pi$  *vb* to make a loud noise > DINS, DINNING, DINNED  
 DIP *n* a brief downwards movement  $\pi$  *vb* to immerse briefly; to lower > DIPS, DIPPING, DIPPED or DIPT  
 DIS *vb* to dismiss, put down > DISSES, DISSING, DISSED  
 DIT *n* a poem; the words of a song  $\pi$  *vb* a Scots word for to block > DITS, DITTING, DITTED or DITTIT  
 DIV *n* an evil spirit of Persian mythology > DIVS  
 DOB *vb* to inform on or betray > DOBS, DOBBING, DOBBED  
 DOC *n* short for doctor > DOCS  
 DOD *n* a lump  $\pi$  *vb* to knock, thump > DODS, DODDING, DODDED  
 DOE *n* the female of a deer, rabbit and some other animals > DOES  
 DOF *adj* a S. African word for stupid  
 DOG *n* a wild or domestic animal of the genus Canis  $\pi$  *vb* to follow like a dog > DOGS, DOGGING, DOGGED  
 DOH *n* a musical note > DOHS  
 DOL *n* a unit of pain intensity > DOLS  
 DOM *n* a title given to certain monks > DOMS  
 DON *n* a university lecturer  $\pi$  *vb* to put on (clothes, etc.) > DONS, DONNING, DONNED  
 DOO *n* a dove or pigeon > DOOS  
 DOP *vb* to dip > DOPS, DOPPING, DOPPED  
 DOR *n* mockery; a kind of dung-beetle  $\pi$  *vb* to mock, scoff at > DORS, DORRING, DORRED  
 DOS *pl* < DO, a musical note; a party  
 DOT *n* a very small spot  $\pi$  *vb* to make such a spot > DOTS, DOTTING, DOTTED  
 DOW *n* a kind of Arab boat  $\pi$  *vb* to be able > DOWS, DOWING, DOWED or DOCHT or DOUGHT  
 DOY *n* a beloved person > DOYS  
 DRY *adj* not wet > DRIER or DRYER, DRIEST or DRYEST, DRILY or DRYLY  $\pi$  *n* a prohibitionist > DRYS  $\pi$  *vb* to make dry > DRIES, DRYING, DRIED  
 DSO *n* in the Himalayas, a cross between a yak and a cow > DSOS  
 DUB *vb* to add sound effects, etc., to > DUBS, DUBBING, DUBBED  
 DUD *n* something or someone ineffectual > DUDS  
 DUE *adj* required > DULY  $\pi$  *vb* to endue > DUES, DUING, DUED  
 DUG *n* the teat or udder of a female mammal > DUGS  
 DUH *int* an ironic response to a question  
 DUI *pl* < DUO, two people considered a pair for a specific reason  
 DUM *adj* cooked with steam  
 DUN *adj* grey-brown > DUNNER, DUNNEST  $\pi$  *n* a grey-brown colour  $\pi$  *vb* to press for payment > DUNS, DUNNING, DUNNED  
 DUO *n* two people considered a pair for a specific reason > DUI or DUOS  
 DUP *vb* to undo > DUPS, DUPPED, DUPPING  
 DUX *n* a leader > DUCES or DUXES  
 DYE *n* a colour used to stain  $\pi$  *vb* to colour with dye > DYES, DYEING, DYED  
 DZO *n* in the Himalayas, a cross between a yak and a cow > DZOS  
 EAN *vb* a Shakespearean word meaning to give birth to > EANS, EANING, EANED  
 EAR *n* the organ of hearing  $\pi$  *vb* to plough or till > EARS, EARING, EARED  
 EAS *pl* < EA, a river  
 EAT *vb* to consume by mouth > EATS, EATING, EATEN, ATE or (obs.) ET  
 EAU *n* water > EAUS or EAUX  
 EBB *n* the recession of the tide  $\pi$  *vb* to move back from the land, to recede > EBBS, EBBING, EBBED  
 ECH *vb* an obsolete form of eke > ECHES, ECHING, ECHED  
 ECO *n* short for ecology > ECOS  
 ECU *n* a European unit of currency > ECUS  
 EDH *n* a letter used in old English > EDHS  
 EDS *pl* < ED, education  
 EEK *int* an interjection expressing fright

EEL *n* a long, smooth, cylindrical fish > EELS, EELY  
 EEN *pl* < EE, eye  
 EEW *int* an interjection used to express disgust  
 EFF *vb* a euphemism for to fuck > EFFS, EFFING, EFFED  
 EFS *pl* < EF, the letter F  
 EFT *n* a newt > EFTS  
 EGG *n* an oval or round body from which young are hatched  $\approx$  *vb* to add eggs to (in cooking, etc.); to urge on > EGGS, EGGING, EGGED  
 EGO *n* the 'I' or self > EGOS  
 EHS *vb* 3<sup>rd</sup> person singular of EH, to say 'eh'  
 EIK *vb* an obsolete form of eke > EIKS, EIKING, EIKED  
 EKE *vb* to add to or increase, especially so as to make a supply last > EKES, EKING, EKED  
 ELD *n* an old word for age, old age > ELDS  
 ELF *n* a fairy-like being > ELVES  $\approx$  *vb* a Shakespearean word meaning to entangle hair > ELFS, ELFING, ELFED  
 ELK *n* a kind of large deer > ELKS  
 ELL *n* an old measure of length, used especially for cloth > ELLS  
 ELM *n* a kind of tree > ELMS, ELMEN, ELMY  
 ELS *pl* < EL, an elevated railroad  
 ELT *n* a young sow > ELTS  
 EME *n* an old word for uncle > EMES  
 EMO *n* a type of music combining traditional hard rock with personal and emotional lyrics > EMOS  
 EMS *pl* < EM, a printing unit  
 EMU *n* a flightless, fast-running bird > EMUS  
 END *n* the last point or portion  $\approx$  *vb* to finish or close > ENDS, ENDING, ENDED  
 ENE *n* a poetic word for evening > ENES  
 ENG *n* a phonetic symbol representing the sound ng, aka agma > ENGS  
 ENS *n* being, existence; an entity > ENTIA  
 EON *n* a long period of time > EONS  
 ERA *n* a series of years; an age > ERAS  
 ERE *adv* before  $\approx$  *vb* an old word for to plough > ERES, ERING, ERED  
 ERF *n* in S. Africa, a garden plot > ERVEN  
 ERG *n* a unit of work > ERGS; a Saharan area of shifting sands > AREG  
 ERK *n* an aircraftsman > ERKS  
 ERM *int* an interjection expressing hesitation or doubt  
 ERN *vb* to earn > ERNS, ERNING, ERNED  
 ERR *vb* to make a mistake > ERRS, ERRING, ERRED  
 ERS *n* the bitter vetch > ERSES  
 ESS *n* the letter S > ESSSES  
 EST *n* a programme designed to develop human potential (Erhard Seminars Training) > ESTS  
 ETA *n* a letter of the Greek alphabet > ETAS  
 ETH *n* a letter used in old English, same as edh > ETHS  
 EUK *n* an old word for itch  $\approx$  *vb* to itch > EUKS, EUKING, EUKED  
 EVE *n* a poetic word for evening > EVES  
 EVO *n* Australian slang for evening > EVOS  
 EWE *n* a female sheep > EWES  
 EWK *n* an old word for itch  $\approx$  *vb* to itch > EWKS, EWKING, EWKED  
 EWT *n* an old word for newt > EWTS  
 EXO *adj* Australian slang for excellent  
 EYE *n* the organ of sight > EYES, (obs.) EEN, EINE, EYNE, (US) EYEN  $\approx$  *vb* to look at carefully > EYES, EYING or EYEING, EYED  
 FAA *vb* a Scots word for fall > FAAS, FAAING, FELL, FAAN or FALLEN  
 FAB *adj* marvellous > FABBER, FABBEST  $\approx$  *n* a fabrication > FABS  
 FAD *n* a craze > FADS, FADDY  
 FAE *prep* a Scots word for from  
 FAG *n* a tiresome task; (offensive slang) a homosexual  $\approx$  *vb* to work, or be worked, hard > FAGS, FAGGING, FAGGED  
 FAH *n* a musical note > FAHS  
 FAN *n* an instrument used for cooling  $\approx$  *vb* to cool, as with a fan > FANS, FANNING, FANNED  
 FAP *adj* fuddled or drunk  
 FAR *adj* distant > FARTHER or FURTHER, FARTHEST or FURTHEST  $\approx$  *adv* a long way  $\approx$  *vb* to remove to a distance > FARS, FARRING, FARRED

FAS *pl* < FA, a musical note  
 FAT *adj* stoutly built > FATTER, FATTEST, FATLY  $\pi$  *n* a substance found in adipose tissue  $\pi$  *vb* to make or grow fat > FATS, FATTING, FATTED  
 FAW *n* a gypsy > FAWS  
 FAX *n* facsimile  $\pi$  *vb* to send messages via a machine that scans electronically > FAXES, FAXING, FAXED  
 FAY *adj* whimsical > FAYER, FAYEST  $\pi$  *n* a fairy  $\pi$  *vb* to clean out especially a ditch > FAYS, FAYING, FAYED  
 FED *n* a federal agent > FEDS  
 FEE *n* the price paid for services  $\pi$  *vb* to pay a fee to > FEES, FEEING, FEED  
 FEG *n* a segment of an orange > FEGS  
 FEH *n* a letter of the Hebrew alphabet > FEHS  
 FEM *n* a passive homosexual > FEMS  
 FEN *n* low marshy land > FENS  
 FER *prep* a dialect word for for  
 FES *pl* < FE, a letter of the Hebrew alphabet  
 FET *vb* an old word for fetch > FETS, FETTING, FETTED  
 FEU *n* a tenure where the vassal, in place of military services, makes a return in grain or in money  $\pi$  *vb* to grant or hold land in feu land tenure > FEUS, FEUING, FEUED  
 FEW *adj* not many > FEWER, FEWEST  $\pi$  *n* a small number > FEWS  
 FEY *adj* foreseeing the future > FEYER, FEYEST, FEYLY  $\pi$  *vb* to clean out, especially a ditch > FEYS, FEYING, FEYED  
 FEZ *n* a red brimless cap of wool or felt > FEZES or FEZZES, FEZZED  
 FIB *n* a small lie  $\pi$  *vb* to tell a small lie > FIBS, FIBBING, FIBBED  
 FID *n* a conical pin of hard wood > FIDS  
 FIE *int* an interjection denoting disapproval  $\pi$  *adj* whimsical, fey > FIER, FIEST  
 FIG *n* a shrub of the mulberry family; its fruit  $\pi$  *vb* to dress up > FIGS, FIGGING, FIGGED  
 FIL *n* the shaft of a vehicle > FILS  
 FIN *n* an organ by which an aquatic animal steers, balances or swims  $\pi$  *vb* to equip with fins > FINS, FINNING, FINNED  
 FIR *n* a kind of conifer > FIRS  
 FIT *adj* healthy, suitable > FITTER, FITTEST, FITLY  $\pi$  *vb* to make suitable > FITS, FITTING, FITTED  
 FIX *vb* to make firm, to arrange > FIXES, FIXING, FIXED or FIXT  
 FIZ *n* a sputtering sound  $\pi$  *vb* to make a hissing or sputtering sound > FIZZES, FIZZING, FIZZED  
 FLU *n* influenza > FLUS  
 FLY *adj* surreptitious or sly > FLIER or FLYER, FLIEST or FLYEST  $\pi$  *n* any insect of the order Diptera  $\pi$  *vb* to travel through the air > FLIES, FLYING, FLOWN, FLEW; to hit a ball high into the air in baseball > FLIES, FLYING, FLIED  
 FOB *vb* to put off > FOBS, FOBBING, FOBBED  
 FOE *n* an enemy > FOES or (Spenser) FOEN or FONE  
 FOG *n* a thick cloudlike mist near the ground  $\pi$  *vb* to be affected by fog > FOGS, FOGGING, FOGGED  
 FOH *int* an expression of disgust  
 FON *n* an old word for fool > FONLY  $\pi$  *vb* to fool, be foolish > FONS, FONNING, FONNED  
 FOO *n* a name for a temporary computer variable or file > FOOS  
 FOP *n* an affected dandy  $\pi$  *vb* to deceive > FOPS, FOPPING, FOPPED  
 FOR *prep* in the place of; in favour of; towards  
 FOU *adj* a Scots word for drunk > FOUER, FOUEST  $\pi$  *n* a bushel > FOUS  
 FOX *n* a dog-like animal  $\pi$  *vb* to act cunningly, to cheat > FOXES, FOXING, FOXED  
 FOY *n* a parting entertainment or gift; a Spenserian word for allegiance, loyalty > FOYS  
 FRA *n* brother > FRAS  
 FRO *prep* from  $\pi$  *n* an African hairstyle > FROS  
 FRY *vb* to cook in oil or fat > FRIES, FRYING, FRIED  
 FUB *vb* to put off > FUBS, FUBBING, FUBBED  
 FUD *n* a rabbit or hare's tail > FUDS  
 FUG *n* a very hot, close atmosphere  $\pi$  *vb* to cause a fug in > FUGS, FUGGING, FUGGED  
 FUM *n* a fabulous bird in Chinese myth > FUMS  
 FUN *adj* providing enjoyment > FUNNER, FUNNEST  $\pi$  *n* pleasure, enjoyment  $\pi$  *vb* to play, frolic > FUNS, FUNNING, FUNNED  
 FUR *n* the thick, soft, fine hair of certain animals  $\pi$  *vb* to cover or coat with fur > FURS, FURRING, FURRED  
 GAB *n* chat, gossip  $\pi$  *vb* to chatter > GABS, GABBING, GABBED  
 GAD *vb* to wander about idly > GADS, GADDING, GADDED  
 GAE *vb* a Scots word for go > GAES, GAEING, GAEN, GAUN, GAED  
 GAG *n* something put into the mouth or over it to enforce silence  $\pi$  *vb* to silence > GAGS, GAGGING, GAGGED

GAK *n* slang for cocaine > GAKS  
 GAL *n* colloquial for girl > GALS  
 GAM *n* a school of whales; a social visit between whalers  $\mp$  *vb* to join up in a gam > GAMS, GAMMING, GAMED  
 GAN *vb* a dialect word for go > GANS, GANNING, GANNED  
 GAP *n* an opening or breach  $\mp$  *vb* to make a gap in > GAPS, GAPPING, GAPPED  
 GAR *vb* a Scots word for compel > GARS, GARRING, GARRED or GART  
 GAS *n* a state of matter > GASES  $\mp$  *vb* to poison with gas > GASSES, GASSING, GASSED  
 GAT *n* a slang word for pistol > GATS  
 GAU *n* a German political district of the Nazi regime > GAUS  
 GAW *n* an imperfect rainbow or other supposed sign of coming weather > GAWS  
 GAY *adj* cheerful > GAYER, GAYEST, GAILY or GAYLY  $\mp$  *n* a homosexual > GAYS  
 GED *n* a pike > GEDS  
 GEE *vb* of horses, to urge on > GEES, GEEING, GEED  
 GEL *n* a jelly-like apparently solid colloidal solution  $\mp$  *vb* to form a gelatinous substance > GELS, GELLING, GELLED  
 GEM *n* any precious stone, especially when cut  $\mp$  *vb* to adorn with gems > GEMS, GEMMING, GEMMED  
 GEN *n* short for general information  $\mp$  *vb* to gain information > GENS, GENNING, GENNED  
 GEO *n* a gully or creek > GEOS  
 GER *n* in Mongolia, a kind of felt tent, a yurt > GERS  
 GET *n* a divorce by Jewish law > GITTIN  $\mp$  *vb* to obtain > GETS, GETTING, GOTTEN, GOT  
 GEY *adj* considerable > GEYER, GEYEST  
 GHI *n* clarified butter > GHIS  
 GIB *n* a wedge-shaped piece of metal  $\mp$  *vb* to fasten with a gib > GIBS, GIBBING, GIBBED  
 GID *n* a disease of sheep > GIDS  
 GIE *vb* a Scots word for give > GIES, GIEING, GIEN, GIED  
 GIF *n* a type of computer image > GIFS  
 GIG *n* an engagement, especially of a band or pop group for one performance only  $\mp$  *vb* to play a gig > GIGS, GIGGING, GIGGED  
 GIN *n* an alcoholic drink  $\mp$  *vb* to process cotton > GINS, GINNING, GINNED; an old word for begin > GINS, GINNING, GAN or GUNNEN  
 GIO *n* a gully or creek > GIOS  
 GIP *vb* to swindle > GIPS, GIPPING, GIPPED  
 GIS *pl* < GI, a karate costume  
 GIT *n* a stupid person  $\mp$  *vb* to get > GITS, GITTING, GITTED  
 GJU *n* a type of violin formerly used in Shetland > GJUS  
 GNU *n* a kind of African antelope > GNUS  
 GOA *n* a kind of Tibetan gazelle, grey-brown with backward-curving horns > GOAS  
 GOB *n* the mouth  $\mp$  *vb* to spit > GOBS, GOBBING, GOBBED  
 GOD *n* a superhuman being, an object of worship  $\mp$  *vb* to deify > GODS, GODDING, GODDED  
 GOE *n* a gully or creek > GOES  
 GON *n* a geometrical grade > GONS  
 GOO *n* a sticky substance > GOOS  
 GOR *n* a seagull > GORS  
 GOS *pl* < GO, a Japanese board game  
 GOT *vb* past tense of GET, to obtain  
 GOV *n* short for governor > GOVS  
 GOX *n* gaseous oxygen > GOXES  
 GOY *n* a Jewish word for a non-Jew > GOYIM or GOYS  
 GRR *int* an interjection used to express anger or annoyance  
 GUB *n* a white man  $\mp$  *vb* to strike on the mouth > GUBS, GUBBING, GUBBED  
 GUE *n* a violin formerly used in Shetland > GUES  
 GUL *n* a design used in oriental carpets > GULS  
 GUM *n* an adhesive substance that collects in or exudes from certain plants  $\mp$  *vb* to smear or coat with gum > GUMS, GUMMING, GUMMED  
 GUN *n* a weapon for discharging explosive projectiles  $\mp$  *vb* to discharge such projectiles > GUNS, GUNNING, GUNNED  
 GUP *n* gossip, prattle > GUPS  
 GUR *n* an unrefined, sweet cane sugar; a felt tent > GURS  
 GUS *pl* < GU, a Shetland violin  
 GUT *n* the intestine  $\mp$  *vb* to take the guts out of (a fish, etc.) > GUTS, GUTTING, GUTTED  
 GUV *n* short for governor > GUVS  
 GUY *n* a person  $\mp$  *vb* to make fun of > GUYS, GUYING, GUYED

GYM *n* short for gymnasium > GYMS  
 GYP *n* pain, torture  $\square$  *vb* to swindle > GYPS, GYPING, GYPED  
 HAD *vb* to hold > HADS, HADDING, HAD, HADDEN  
 HAE *vb* a Scots word for have > HAES, HAEING, HAEN, HAED  
 HAG *n* an ugly old woman  $\square$  *vb* a Scots word for to hack or hew > HAGS, HAGGING, HAGGED  
 HAH *int* a sound of surprise > HAHS  
 HAJ *n* a Muslim pilgrimage to Mecca > HAJES  
 HAM *vb* to overact, exaggerate > HAMS, HAMMING, HAMMED  
 HAN *vb* 3rd person plural form of HAVE, to possess  
 HAO *n* a monetary unit of Vietnam > HAOS  
 HAP *adj* chance > HAPLY  $\square$  *vb* to happen by chance > HAPS, HAPPING, HAPPED  
 HAS *n* 3rd person singular present form of HAVE, to possess  
 HAT *n* a covering for the head  $\square$  *vb* to provide with a hat > HATS, HATTING, HATTED  
 HAW *n* the fruit of the hawthorn  $\square$  *vb* to make indecisive noises > HAWS, HAWING, HAWED  
 HAY *n* grass, etc, cut down and dried for fodder  $\square$  *vb* to make hay > HAYS, HAYING, HAYED  
 HEH *n* a letter of the Hebrew alphabet > HEHS  
 HEM *n* an edge or border  $\square$  *vb* to form a hem on > HEMS, HEMMING, HEMMED  
 HEN *n* a female bird  $\square$  *vb* to challenge to a daring act > HENS, HENNING, HENNED  
 HEP *n* a rosehip > HEPS  
 HER *pron* a pronoun or possessive adjective representing a female person or thing  
 HES *pl* < HE, a male person  
 HET *n* short for heterosexual > HETS  
 HEW *vb* to cut with blows > HEWS, HEWING, HEWN, HEWED  
 HEX *n* a magical curse  $\square$  *vb* to bring misfortune > HEXES, HEXING, HEXED  
 HEY *int* an interjection to attract attention  $\square$  *n* a winding country dance  $\square$  *vb* to dance a hey > HEYS, HEYING, HEYED  
 HIC *int* an interjection representing a hiccup  
 HID *vb* past tense of HIDE, to conceal  
 HIE *vb* to hurry along > HIES, HIEING or HYING, HIED  
 HIM *pron* a pronoun representing a male person or thing > HIMS  
 HIN *n* a Hebrew liquid measure > HINS  
 HIP *adj* trendy > HIPPER, HIPPEST, HIPLY  $\square$  *n* the fleshy part of the thigh  $\square$  *vb* to carry on the hip > HIPS, HIPPING, HIPPED or HIPT  
 HIS *adj* of or belonging to a male person or thing  
 HIT *n* a blow; a success  $\square$  *vb* to strike > HITS, HITTING, HIT  
 HMM *int* an interjection expressing thoughtful consideration  
 HOA *int* an interjection calling attention  $\square$  *n* cessation  $\square$  *vb* to stop > HOAS, HOAING, HOAED  
 HOB *n* a flat surface on which pots and pans are placed  $\square$  *vb* to furnish with hobnails > HOBS, HOBBING, HOBBED  
 HOC *adj* this  
 HOD *n* a V-shaped stemmed trough for carrying bricks or mortar on the shoulder  $\square$  *vb* to bob or jog > HODS, HODDING, HODDED  
 HOE *n* a tool for loosening the earth  $\square$  *vb* to use a hoe > HOES, HOEING, HOED  
 HOG *n* a kind of pig  $\square$  *vb* to use selfishly > HOGS, HOGGING, HOGGED  
 HOH *int* an interjection calling attention  $\square$  *n* cessation  $\square$  *vb* to stop > HOHS, HOING, HOHED  
 HOI *vb* to urge or incite > HOIS, HOIING, HOIED  
 HOM *n* a sacred plant of the ancient Persians > HOMS  
 HON *n* short for honey, as a term of endearment > HONS  
 HOO *int* an interjection expressing boisterous emotion  
 HOP *n* a plant of the mulberry family, used to flavour beer  $\square$  *vb* to leap on one leg > HOPS, HOPPING, HOPPED  
 HOS *pl* < HO, an interjection calling attention etc; a disrespectful term for a woman  
 HOT *adj* very warm > HOTTER, HOTTEST, HOTLY  $\square$  *vb* to heat > HOTS, HOTTING, HOTTED  
 HOW *adv* in what manner  $\square$  *n* a low hill > HOWS  
 HOX *vb* to hamstring > HOXES, HOXING, HOXED  
 HOY *vb* to incite > HOYS, HOYING, HOYED  
 HUB *n* the centre of a wheel > HUBS  
 HUE *n* a colour or tint > HUES, HUED  
 HUG *n* an embrace  $\square$  *vb* to embrace > HUGS, HUGGING, HUGGED  
 HUH *int* an interjection expressing non-understanding  
 HUI *n* a Maori gathering > HUIS  
 HUM *n* a low murmur as of bees  $\square$  *vb* to make a humming sound > HUMS, HUMMING, HUMMED  
 HUN *n* a barbarous and destructive person > HUNS

HUP *int* a call (to a horse) to go faster or to turn to the right  $\pi$  *vb* to turn a horse to the right > HUPS, HUPPING, HUPPED

HUT *n* a small, mean or crudely built house  $\pi$  *vb* to settle in a hut > HUTS, HUTTING, HUTTED

HYE *vb* to hasten > HYES, HYEING, HYED

HYP *vb* to offend > HYPES, HYPPING, HYPPE

ICE *n* frozen water  $\pi$  *vb* to cool with ice > ICES, ICING, ICED

ICH *vb* an old form of eke > ICHS or ICHES, ICHING, ICHED

ICK *n* something sticky or disgusting > ICKS

ICY *adj* covered with ice > ICIER, ICIEST, ICILY

IDE *n* a fish of the carp family > IDES

IDS *pl* < ID, a fish of the carp family

IFF *conj* 'If and only if' as used in logic

IFS *pl* < IF, a condition

IGG *vb* to ignore, snub > IGGS, IGGING, IGGED

ILK *n* a type or kind > ILKS

ILL *adj* unwell > ILLER, ILLEST, ILLY  $\pi$  *n* harm, misfortune > ILLS

IMP *n* a small devil  $\pi$  *vb* to engraft (a hawk) with new feathers > IMPS, IMPING, IMPED

ING *n* a meadow, especially one beside a river > INGS

INK *n* a coloured liquid used in writing  $\pi$  *vb* to colour with ink > INKS, INKED, INKING

INN *n* a hostelry  $\pi$  *vb* to put up at an inn > INNS, INNING, INNED

INS *vb* 3<sup>rd</sup> person singular of IN, to take in

ION *n* an electrically-charged particle formed by loss or gain of electrons by an atom, effecting by its migration the transport of electricity > IONS

IOS *pl* < IO, a cry of 'io'

IRE *n* anger  $\pi$  *vb* to anger > IRES, IRING, IRED

IRK *vb* to annoy or weary > IRKS, IRKING, IRKED

ISH *n* in Scots law, issue or expiry > ISHES

ISM *n* any distinctive theory or fad > ISMS

ISO *n* short for isolated replay, a TV and film facility > ISOS

ITA *n* the miriti palm > ITAS

ITS *adj* of or belonging to something

IVY *n* a climbing evergreen plant > IVIES, IVIED

IWI *n* a Maori word for tribe > IWIS

JAB *n* a prod, a poke  $\pi$  *vb* to poke or stab > JABS, JABBING, JABBED

JAG *n* a sharp projection  $\pi$  *vb* to cut unevenly > JAGS, JAGGING, JAGGED

JAI *int* in India, victory (to)

JAK *n* an East Indian tree of the breadfruit family > JAKS

JAM *n* a conserve made with fruit and sugar  $\pi$  *vb* to block up > JAMS, JAMMING, JAMMED

JAP *vb* to splash or spatter > JAPS, JAPPING, JAPPED

JAR *n* a wide-mouthed container  $\pi$  *vb* to put in jars; to give an unpleasant shock to > JARS, JARRING, JARRED

JAW *n* a mouth-structure for biting or chewing  $\pi$  *vb* to chatter at length > JAWS, JAWING, JAWED

JAY *n* a bird of the crow family > JAYS

JEE *vb* of horses, to urge on > JEES, JEEING, JEED

JET *n* a stream of liquid; a jetplane  $\pi$  *vb* to travel by jetplane > JETS, JETTING, JETTED

JEU *n* a French word for game > JEUX

JEW *vb* to haggle, get the better of > JEWS, JEWING, JEWED

JIB *n* the boom of a crane or derrick  $\pi$  *vb* to show objection > JIBS, JIBBING, JIBBED

JIG *n* a lively dance  $\pi$  *vb* to dance a jig; to jump up and down > JIGS, JIGGING, JIGGED

JIN *n* one of a class of spirits in Muslim theology > JINS

JIZ *n* a wig > JIZZES

JOB *n* a task, an employment  $\pi$  *vb* to work at jobs > JOBS, JOBBING, JOBBED

JOE *n* a Scots word for loved one > JOES

JOG *n* a slight shake or push  $\pi$  *vb* to run at a slow, steady pace > JOGS, JOGGING, JOGGED

JOL *vb* a S. African word for to have a good time > JOLS, JOLING, JOLED

JOR *n* the second movement of a raga > JORS

JOT *n* a little bit  $\pi$  *vb* to note down > JOTS, JOTTING, JOTTED

JOW *n* a stroke of a bell  $\pi$  *vb* to ring, toll a bell > JOWS, JOWING, JOWED

JOY *n* gladness  $\pi$  *vb* to rejoice > JOYS, JOYING, JOYED

JUD *n* a mass of coal > JUDS

JUG *n* a pottery jar  $\pi$  *vb* to stew in a jug > JUGS, JUGGING, JUGGED

JUN *n* a coin of N. Korea > JUN

JUS *n* a law or legal right > JURA  
 JUT *vb* to project > JUTS, JUTTING, JUTTED  
 KAB *n* an ancient Hebrew unit of measure > KABS  
 KAE *n* a jackdaw  $\square$  *vb* to serve > KAES, KAING or KAEING, KAED  
 KAF *n* a letter of the Hebrew alphabet > KAFS  
 KAI *n* a New Zealand word for meal > KAIS  
 KAK *n* a S. African word for faeces, rubbish > KAKS  
 KAM *adj* a Shakespearean word for crooked, awry  
 KAS *pl* < KA, the spirit or soul  
 KAT *n* a shrub of E. Africa, Arabia, etc, or its leaves, chewed or taken as tea for their stimulant effect > KATS  
 KAW *vb* to caw > KAWS, KAWING, KAWED  
 KAY *n* the letter K > KAYS  
 KEA *n* a large New Zealand parrot > KEAS  
 KEB *vb* to give birth to a stillborn lamb > KEBS, KEBBING, KEBBED  
 KED *n* a wingless fly that infests sheep > KEDS  
 KEF *n* a state of dreamy intoxication induced by eg cannabis > KEFS  
 KEG *n* a small cask  $\square$  *vb* to put in kegs > KEGS, KEGGING, KEGGED  
 KEN *n* knowledge  $\square$  *vb* to know > KENS, KENNING, KENNED or KENT  
 KEP *vb* a Scots word for catch > KEPS, KEPPING, KEPPED or KEPPIT, KEPPEN, KIPPEN  
 KET *n* carrion, rotting flesh > KETS  
 KEX *n* the hollow stalk of an umbelliferous plant, such as the cow parsnip or the hemlock > KEXES  
 KEY *n* an instrument for locking  $\square$  *vb* to enter (data) into a computer > KEYS, KEYING, KEYED  
 KHI *n* a letter of the Greek alphabet > KHIS  
 KID *n* a young goat; a child  $\square$  *vb* to hoax or deceive > KIDS, KIDDING, KIDDED  
 KIF *n* a state of dreamy intoxication induced by eg cannabis > KIFS  
 KIN *n* one's relations > KINS  
 KIP *n* a nap  $\square$  *vb* to have a nap or sleep > KIPS, KIPPING, KIPPED  
 KIR *n* a wine and blackcurrant drink > KIRS  
 KIS *pl* < KI, the spirit of Japanese martial art  
 KIT *n* equipment  $\square$  *vb* to outfit, provide with equipment > KITS, KITTING, KITTED  
 KOA *n* a Hawaiian acacia > KOAS  
 KOB *n* an African waterbuck > KOBBS  
 KOI *n* a large Japanese carp > KOIS  
 KON *vb* an old word for know > KONS, KONNING, KOND  
 KOP *n* a S. African word for hill > KOPS  
 KOR *n* a Hebrew unit of measure > KORS  
 KOS *n* an Indian measure of distance > KOSES  
 KOW *n* a bunch of twigs > KOWS  
 KUE *n* the letter Q > KUES  
 KYE *n* cows, cattle > KYE; a Korean-American commercial club > KYES  
 KYU *n* a novice grade in judo > KYUS  
 LAB *n* laboratory > LABS  
 LAC *n* a dark-red resin > LACS  
 LAD *n* a boy or youth > LADS  
 LAG *n* a delay  $\square$  *vb* to fall behind > LAGS, LAGGING, LAGGED  
 LAH *n* a musical note > LAHS  
 LAM *n* escape or hurried flight, as in on the lam  $\square$  *vb* to beat > LAMS, LAMMING, LAMMED  
 LAP *n* a circuit of a race track  $\square$  *vb* to scoop up with the tongue > LAPS, LAPPING, LAPPED  
 LAR *n* the god relating to a house > LARES or LARS  
 LAS *pl* < LA, a musical note  
 LAT *n* short for latrine > LATS; a Latvian unit of currency > LATI or LATU  
 LAV *n* lavatory > LAVS  
 LAW *adj* low > LAWER, LAWEST  $\square$  *n* a rule of action established by authority  $\square$  *vb* to take to court > LAWS, LAWING, LAWED  
 LAX *adj* slack, careless > LAXER, LAXEST, LAXLY  $\square$  *n* a kind of salmon > LAXES  
 LAY *n* a situation, a place for lying  $\square$  *vb* to deposit, place horizontal > LAYS, LAYING, LAID or LAYED  
 LEA *n* a meadow or pasture > LEAS  
 LED *vb* past tense of LEAD, to conduct  
 LEE *n* shelter  $\square$  *vb* a Scots word for to tell a lie > LEES, LEEING, LEED  
 LEG *n* a limb for walking and standing  $\square$  *vb* to walk briskly > LEGS, LEGGING, LEGGED  
 LEI *n* a Hawaiian garland or wreath > LEIS

LEK *n* the standard monetary unit of Albania > LEKS, LEKE or LEKU; a piece of ground where blackcock gather and display > LEKS *vb* to perform such a display > LEKS, LEKKING, LEKKED

LEP *vb* a dialect form of leap > LEPS, LEPPING, LEPPED, LEPT

LES *n* short for lesbian > LESES

LET *n* a hindrance; a letting for hire *vb* to allow > LETS, LETTING, LET or (Scots) LOOT, (Scots) LITTEN, LOOTEN, LUTTEN; to hinder > LETS, LETTING, LETTED

LEU *n* a unit of Romanian currency > LEU

LEV *n* a unit of Bulgarian currency > LEVA, LEVS

LEW *n* a unit of Bulgarian currency > LEVA

LEX *n* law > LEXES or LEGES

LEY *n* a meadow or pasture > LEYS

LEZ *n* short for lesbian > LEZES or LEZZES

LIB *vb* to geld > LIBS, LIBBING, LIBBED

LID *n* a cover, hinged or separate, for the opening and closing of a receptacle *vb* to provide with a lid > LIDS, LIDDING, LIDDED

LIE *n* a false statement *vb* to tell a lie > LIES, LYING, LIED; to be in a horizontal position > LIES, LYING, LAIN, LAY

LIG *vb* to lie > LIGS, LIGGING, LIGGED

LIN *n* a waterfall *vb* an old word for cease > LINS, LINNING, LINNED

LIP *n* either of the muscular flaps in front of the teeth *vb* to touch with the lips > LIPS, LIPPING, LIPPED

LIS *n* a fleur-de-lis > LIS or LISSES

LIT *n* a former monetary unit of Lithuania > LITS

LOB *vb* to throw gently > LOBS, LOBBING, LOBBED

LOD *n* a statistic relating to the odds of an event > LODS

LOG *n* a fallen tree trunk *vb* to fell timber > LOGS, LOGGING, LOGGED

LOO *n* colloquial for lavatory *vb* to love > LOOS, LOOING, LOOED

LOP *vb* to cut off unnecessary parts > LOPS, LOPPING, LOPPED

LOR *int* for lord, an interjection expressing surprise

LOS *n* praise, reputation > LOSES

LOT *n* a set of things *vb* to separate into lots > LOTS, LOTTING, LOTTED

LOU *vb* to love > LOUS, LOUING, LOUED

LOW *adj* not high > LOWER, LOWEST, LOWLY *n* that which is low *vb* to make the noise of cattle > LOWS, LOWING, LOWED

LOX *n* liquid oxygen *vb* to supply with liquid oxygen > LOXES, LOXING, LOXED

LOY *n* a long, narrow spade with a footrest on one side of the handle > LOYS

LUD *n* lord, used when addressing a judge > LUDS

LUG *n* an earlike projection or appendage *vb* to pull or drag with difficulty > LUGS, LUGGING, LUGGED

LUM *n* a chimney > LUMS

LUN *n* a less, a sheltered place > LUNS

LUR *n* a Bronze Age trumpet > LURS

LUV *n* love, as a term of endearment > LUVS

LUX *n* a unit of illumination > LUXES or LUCES

LUZ *n* a supposedly indestructible bone in the sacrum > LUZZES

LYE *n* a solution obtained by leaching > LYES

LYM *n* a kind of bloodhound > LYMS

MAA *vb* to bleat as a goat > MAAS, MAAING, MAAED

MAC *n* short for mackintosh > MACS

MAD *adj* insane > MADDER, MADDEST, MADLY *vb* to drive mad > MADS, MADDING, MADDED

MAE *adj* more > MAES

MAG *vb* to tease; to steal > MAGS, MAGGING, MAGGED

MAK *vb* to make > MAKES, MAKING, MADE

MAL *n* a French word for pain, sickness > MALS

MAM *n* mother > MAMS

MAN *n* an adult human male > MEN *vb* to provide with a (human) operator > MANS, MANNING, MANNED or (Spenser) MAND

MAP *n* a diagram of the surface of the earth, etc. *vb* to make a map of > MAPS, MAPPING, MAPPED

MAR *vb* to spoil or damage > MARS, MARRING, MARRED or (Spenser) MARD

MAS *n* a house or home in the south of France > MAS

MAT *n* a tangled mass, especially of hair *vb* to entangle > MATS, MATTING, MATTED

MAW *n* the jaws or gullet of a voracious animal *vb* (US) to mow > MAWS, MAWING, MAWED, MAWN

MAX *vb* to reach the upper limit > MAXES, MAXING, MAXED

MAY *n* hawthorn blossom  $\pi$  *vb* to gather may > MAYS, MAYING, MAYED  
 MED *n* short for medical, medicine > MEDS  
 MEE *n* in Malaysia, noodles or a dish containing noodles > MEES  
 MEG *n* an old word for halfpenny > MEGS  
 MEH *int* mediocre or boring; an expression of indifference or boredom  
 MEL *n* honey > MELS  
 MEM *n* a letter of the Hebrew alphabet > MEMS  
 MEN *pl* < MAN, an adult human male  
 MES *pl* < ME, a musical note  
 MET *n* short for meteorology > METS  
 MEU *n* the spignel plant > MEUS  
 MEW *vb* of a cat, to make a high pitched cry > MEWS, MEWING, MEWED  
 MHO *n* a unit of electrical inductance > MHOS  
 MIB *n* a type of playing marble > MIBS  
 MIC *n* short for microphone > MICS  
 MID *adj* middle  $\pi$  *n* the middle > MIDS  
 MIG *n* a type of playing marble > MIGS  
 MIL *n* a unit of wire measurement > MILS  
 MIM *adj* prim, demure, prudish > MIMMER, MIMMEST  
 MIR *n* a Muslim ruler > MIRS; a Russian farming community > MIRS or MIRI  
 MIS *pl* < MI, a musical note  
 MIX *n* a blend, a mixture  $\pi$  *vb* to mingle > MIXES, MIXING, MIXED or MIXT  
 MIZ *n* short for misery > MIZZES  
 MMM *int* an interjection expressing agreement or enjoyment  
 MNA *n* a Greek unit of weight or money > MNAS  
 MOA *n* a gigantic extinct bird > MOAS  
 MOB *n* a disorderly crowd  $\pi$  *vb* to form into a mob > MOBS, MOBING, MOBLED  
 MOC *n* short for moccasin > MOCS  
 MOD *n* one who wears boldly stylish clothes  $\pi$  *vb* to modify a machine or piece of software > MODS, MODDING, MODDED  
 MOE *n* a wry face > MOES  
 MOG *vb* to move away > MOGS, MOGGING, MOGGED  
 MOI *pron* a French word for me, facetiously used in English  
 MOL *n* a unit of molecular concentration > MOLS  
 MOM *n* mother > MOMS  
 MON *n* a Japanese family badge or crest > MON  
 MOO *vb* of cattle, to low > MOOS, MOOING, MOOED  
 MOP *n* a sponge, etc., on a stick  $\pi$  *vb* to clean with a mop > MOPS, MOPPING, MOPPED  
 MOR *n* a layer of humus > MORS  
 MOS *pl* < MO, a moment  
 MOT *n* a French word meaning word > MOTS  
 MOU *n* a Scots word for mouth > MOUS  
 MOW *vb* to cut the grass on > MOWS, MOWING, MOWN, MOWED  
 MOY *n* a Shakespearean word for coin or a measure > MOYS  
 MOZ *n* Australian slang for bad luck > MOZZES  
 MUD *n* wet soft earth  $\pi$  *vb* to bury or hide in mud > MUDS, MUDDING, MUDDERED  
 MUG *n* a cup with vertical sides  $\pi$  *vb* to attack from behind > MUGS, MUGGING, MUGGED  
 MUM *adj* silent  $\pi$  *n* mother  $\pi$  *vb* to act in a mime > MUMS, MUMMING, MUMMED  
 MUN *n* a dialect word for man > MUNS  
 MUS *pl* < MU, a letter of the Greek alphabet  
 MUT *n* a mongrel, a blockhead > MUTS  
 MUX *vb* to spoil, botch > MUXES, MUXING, MUXED  
 MYC *n* a cancer-causing gene > MYCS  
 NAB *vb* to seize > NABS, NABBING, NABBED  
 NAE *n* a Scots word for no > NAES  
 NAG *n* a small horse; a querulous complaint  $\pi$  *vb* to worry or annoy constantly > NAGS, NAGGING, NAGGED  
 NAH *int* no  
 NAM *n* the action of taking another's goods by distraint > NAMS  
 NAN *n* a kind of slightly leavened Indian bread > NANS  
 NAP *n* a short sleep  $\pi$  *vb* to take a short sleep > NAPS, NAPPING, NAPPED  
 NAS *vb* an old contraction of ne has, has not and ne was, was not

NAT *n* short for nationalist > NATS  
 NAV *n* short for navigation > NAVS  
 NAW *int* colloquial for no  
 NAY *int* no  $\pi$  *n* a denial > NAYS  
 NEB *n* a bird's bill  $\pi$  *vb* to put a bill on > NEBS, NEBBING, NEBBED  
 NED *n* a young hooligan > NEDS  
 NEE *adj* of a woman, born with the name of  
 NEF *n* an elaborate table decoration in the shape of a ship for holding such things as table napkins and condiments > NEFS  
 NEG *n* a photographic negative > NEGS  
 NEK *n* in S. Africa, a col, a pass in a mountain range > COLS  
 NEP *n* catmint, a plant attractive to cats > NEPS  
 NET *n* an open material, formed into meshes  $\pi$  *vb* to catch (fish) in a net > NETS, NETTING, NETTED  
 NEW *adj* of recent origin > NEWER, NEWEST, NEWLY  $\pi$  *vb* an old form of renew > NEWS, NEWING, NEWED  
 NIB *n* the writing point of a pen  $\pi$  *vb* to provide with a nib > NIBS, NIBBING, NIBBED  
 NID *n* a pheasant's nest or brood > NIDS  
 NIE *vb* to nigh, approach > NIES, NYING, NIED  
 NIL *n* nothing > NILS  
 NIM *vb* to take or steal > NIMS, NIMMING, NIMMED  
 NIP *n* a pinch, a sharp feeling of cold  $\pi$  *vb* to pinch > NIPS, NIPPING, NIPPED  
 NIS *n* in Scandinavian folklore, a brownie or goblin > NISSES  
 NIT *n* a young louse; a fool > NITS  
 NIX *n* a water-sprite > NIXE or NIXES  $\pi$  *vb* to veto or cancel > NIXES, NIXING, NIXED  
 NOB *n* a person of high social rank > NOBS  
 NOD *n* a quick bending forward of the head  $\pi$  *vb* to move the head forward in assent or greeting > NODS, NODDING, NODDED  
 NOG *n* a wooden peg; a kind of drink  $\pi$  *vb* to fix with a nog, a wooden peg > NOGS, NOGGING, NOGGED  
 NOH *n* a traditional style of Japanese drama > NOH  
 NOM *n* a French word meaning name > NOMS  
 NON *adj* not  
 NOO *adv* a Scots word for now  
 NOR *conj* and not; neither  
 NOS *pl* < NO, a word of negation  
 NOT *int* expressing denial, negation or refusal  
 NOW *adv* at present  $\pi$  *n* the present time > NOWS  
 NOX *n* nitrogen oxide > NOXES  
 NOY *vb* to annoy > NOYS, NOYING, NOYED  
 NTH *adj* an ordinal implying a large indefinite number  
 NUB *n* a knob  $\pi$  *vb* an old word meaning to execute by hanging > NUBS, NUBBING, NUBBED  
 NUG *n* a chunk of wood sawn from a log > NUGS  
 NUN *n* a female member of a religious order > NUNS  
 NUR *n* a knot in wood > NURS  
 NUS *pl* < NU, a letter of the Greek alphabet  
 NUT *n* an edible seed in a hard shell  $\pi$  *vb* to look for and gather nuts > NUTS, NUTTING, NUTTED  
 NYE *n* a pheasant's nest  $\pi$  *vb* an old form of nigh, approach > NYES, NYING, NYED  
 NYM *adj* as in nym war, a dispute about the right to publish material on the internet under a fictitious name  
 NYS *vb* a Spenserian contraction of is not  
 OAF *n* a lout; an idiot > OAFS or OAVES  
 OAK *n* a kind of tree; its wood > OAKS, OAKED  
 OAR *n* a light pole with a blade at one end for propelling a boat  $\pi$  *vb* to row a boat > OARS, OARING, OARED  
 OAT *n* a kind of grass, the seeds of which are used as food > OATS  
 OBA *n* in West Africa, a chief or ruler > OBAS  
 OBE *n* a form of West Indian witchcraft > OBES  
 OBI *n* a form of West Indian witchcraft  $\pi$  *vb* to bewitch > OBIS, OBIING, OBIED  
 OBO *n* a vessel for carrying oil and bulk ore > OBOS  
 OBS *pl* < OB, an objection  
 OCA *n* a S. American wood-sorrel with edible tubers > OCAS  
 OCH *int* an interjection expressing regret or impatience  
 ODA *n* a room in a harem > ODAS  
 ODD *adj* strange, unpaired > ODDER, ODDEST, ODDLY  $\pi$  *n* in golf, an additional or allowed stroke > ODDS  
 ODE *n* an elaborate lyric addressed to someone or something > ODES

ODS *pl* < OD, a hypothetical force supposed by Reichenbach to account for magnetism etc  
 OES *pl* < OE, a grandchild  
 OFF *adv* away, not on  $\pi$  *n* the start  $\pi$  *vb* to go off > OFFS, OFFING, OFFED  
 OFT *adv* often > OFTER, OFTEST  
 OHM *n* a unit of electrical resistance > OHMS  
 OHO *int* an expression of triumph or surprise  
 OHS *vb* 3<sup>rd</sup> person singular of OH, to say oh  
 OIK *n* an inferior person > OIKS  
 OIL *n* a greasy, flammable liquid  $\pi$  *vb* to smear or lubricate with oil > OILS, OILING, OILED  
 OIS *pl* < OI, a New Zealand bird, the grey-faced petrel  
 OKA *n* a Turkish unit of weight > OKAS  
 OKE *n* a Turkish unit of weight > OKES  
 OLD *adj* aged > OLDER, OLDEST  $\pi$  *n* an individual of a specified age > OLDS  
 OLE *int* a shout of approval > OLES  
 OLM *n* a kind of blind salamander > OLMS  
 OMA *n* (German) a grandfather > OMAS  
 OMS *pl* < OM, a Hindu sacred symbol  
 ONE *adj* single, of unit number  $\pi$  *n* an individual thing or person; the number or figure 1 > ONES  
 ONO *n* a Hawaiian fish > ONOS  
 ONS *vb* 3<sup>rd</sup> person singular of ON, to go on with  
 ONY *adj* any  
 OOF *n* money > OOFs  
 OOH *int* expressing surprise  $\pi$  *n* an exclamation of ooh  $\pi$  *vb* to express pleasure or surprise with 'ooh' > OOHS, OOHING, OOHED  
 OOM *n* a S. African word for uncle > OOMS  
 OON *n* a Scots word for oven > OONS  
 OOP *vb* to bind with thread, join > OOPS, OOPING, OOPED  
 OOR *adj* a Scots word for our  
 OOS *pl* < OO, wool  
 OOT *adv* out  $\pi$  *n* an out > OOTS  
 OPA *n* (German) a grandfather > OPAS  
 OPE *vb* a poetic word for to open > OPES, OPING, OPED  
 OPS *pl* < OP, an operation  
 OPT *vb* to decide or choose > OPTS, OPTING, OPTED  
 ORA *pl* < OS, a bone  
 ORB *n* anything spherical  $\pi$  *vb* to form into an orb > ORBS, ORBING, ORBED  
 ORC *n* a killer whale > ORCS  
 ORD *n* a point of a weapon > ORDS  
 ORE *n* a solid mineral aggregate > ORES  
 ORF *n* a viral infection of sheep > ORFS  
 ORG *n* an organization > ORGS  
 ORS *pl* < OR, the heraldic tincture gold  
 ORT *n* a leftover from a meal > ORTS  
 OSE *n* an esker, a narrow ridge of gravel and sand > OSES  
 OUD *n* a stringed instrument of Northern Africa > OUDS  
 OUK *n* a Scots word for week > OUKS  
 OUP *vb* to bind with thread, join > OUPS, OUPING, OUPED  
 OUR *adj* of or belonging to us  
 OUS *pl* < OU, a man, a bloke  
 OUT *adv* not within  $\pi$  *n* a way out, an exit  $\pi$  *vb* to put or throw out > OUTS, OUTING, OUTED  
 OVA *pl* < OVUM, an egg  
 OWE *vb* to be in debt for > OWES, OWING, OWED  
 OWL *n* any member of the Strigiformes, nocturnal predacious birds  $\pi$  *vb* to smuggle, especially wool or sheep from France > OWLS, OWLING, OWLED  
 OWN *adj* belonging to oneself  $\pi$  *pron* what belongs to oneself  $\pi$  *vb* to possess > OWNS, OWNING, OWNED  
 OWT *n* a dialect word meaning anything > OWTS  
 OXO *adj* of compounds, containing oxygen  
 OXY *adj* of compounds, containing oxygen  $\pi$  *n* a powerful analgesic drug, synthesised from thebaine > OXIES  
 OYE *n* a Scots word for grandchild > OYES  
 OYS *pl* < OY, a grandchild  
 PAC *n* a shoe patterned after a moccasin > PACS

PAD *n* anything stuffed with a soft material, to prevent friction, pressure, etc. (verb) to cover or fill with soft material > PADS, PADDING, PADDED

PAH *n* a Maori hill fort > PAHS

PAK *n* (colloquial) a pack > PAKS

PAL *n* a friend  $\pi$  *vb* to associate as a pal > PALS, PALLING, PALLED

PAM *n* the knave of clubs > PAMS

PAN *n* a broad, shallow container  $\pi$  *vb* to wash earth for gold > PANS, PANNING, PANNED

PAP *n* soft food for infants  $\pi$  *vb* to feed soft pap food to infants > PAPS, PAPPING, PAPPED

PAR *n* a state of equality  $\pi$  *vb* to score a standard number of strokes in golf > PARS, PARRING, PARRED

PAS *n* a French word for step > PAS

PAT *adj* hitting the mark precisely > PATLY  $\pi$  *n* a light touch  $\pi$  *vb* to stroke gently > PATS, PATTING, PATTED

PAV *n* short for pavlova, a type of dessert consisting of a meringue base topped with whipped cream > PAVS

PAW *n* a clawed foot  $\pi$  *vb* to scrape with a paw > PAWS, PAWING, PAWED

PAX *n* peace, a truce > PAXES

PAY *n* wages  $\pi$  *vb* to remunerate > PAYS, PAYING, PAID; to seal with tar > PAYS, PAYING, PAYED

PEA *n* a vegetable, the rounded seed of a climbing plant > PEAS

PEC *n* a pectoral muscle > PECS

PED *n* short for pedestrian > PEDS

PEE *n* the letter P  $\pi$  *vb* to urinate > PEES, PEEING, PEED

PEG *n* a pin or fixture  $\pi$  *vb* to fasten with a peg > PEGS, PEGGING, PEGGED

PEH *n* a letter of the Hebrew alphabet > PEHS

PEL *n* an earlier, now less common, word for a pixel > PELS

PEN *n* an implement for writing  $\pi$  *vb* to write down on paper > PENS, PENNING, PENNED; to put in a pen (enclosure) > PENS, PENNING, PENNED or PENT

PEP *n* vigour or spirit  $\pi$  *vb* to put pep into > PEPS, PEPPING, PEPPED

PER *prep* for each; by

PES *n* the human foot > PEDES

PET *n* a tame animal; a favourite  $\pi$  *vb* to treat as a pet > PETS, PETTING, PETTED

PEW *n* a bench in a church > PEWS

PHI *n* a letter of the Greek alphabet > PHIS

PHO *n* a Vietnamese noodle soup > PHOS

PHT *int* an interjection expressing mild anger

PIA *n* a tropical plant > PIAS

PIC *n* short for picture > PICS or PIX

PIE *n* a quantity of meat, fruit, or other food baked within or under a crust of prepared pastry  $\pi$  *vb* to reduce to confusion > PIES, PIEING or PIING, PIED

PIG *n* a farm animal bred for food  $\pi$  *vb* to eat greedily > PIGS, PIGGING, PIGGED

PIN *n* a piece of wood or metal used for fastening  $\pi$  *vb* to fasten with a pin > PINS, PINNING, PINNED

PIP *n* a small hard seed in a fruit  $\pi$  *vb* to offend or disgust > PIPS, PIPPING, PIPPED

PIR *n* a Muslim title of honour, given to a holy man > PIRS

PIS *pl* < PI, a letter in the Greek alphabet

PIT *n* a hole in the earth  $\pi$  *vb* to make a pit in > PITS, PITTING, PITTED; a Scots form of put > PITS, PITTING, PUTTEN, PITTEN, PAT

PIU *adv* more

PIX *n* a box in which coins are kept for testing > PIXES

PLU *n* a beaver pelt > PLUS

PLY *n* a fold  $\pi$  *vb* to bend or fold > PLIES, PLYING, PLIED

POA *n* a meadow-grass plant > POAS

POD *n* the fruit, or its shell, in peas, beans, and other leguminous plants  $\pi$  *vb* to shell peas > PODS, PODDING, PODDED

POH *vb* to reject contemptuously > POHS, POHING, POHED

POI *n* a Hawaiian dish of fermented taro > POIS

POL *n* short for a politician > POLS

POM *n* short for Pomeranian dog > POMS

POO *n* excrement  $\pi$  *vb* to defecate > POOS, POOING, POOED

POP *n* a mild explosive sound; a genre of popular music  $\pi$  *vb* to make a pop > POPS, POPPING, POPPED

POS *adj* short for positive

POT *n* a utensil used for cooking or storing  $\pi$  *vb* to cook or put in a pot > POTS, POTTING, POTTED

POW *n* a Scots word for head > POWS

POX *n* any of several virus diseases causing a rash of pustules  $\pi$  *vb* to infect with pox > POXES, POXING, POXED

POZ *adj* short for positive

PRE *prep* before  
 PRO *n* short for professional, or prostitute > PROS  
 PRY *vb* to enquire impertinently into > PRIES, PRYING, PRIED  
 PSI *n* a letter of the Greek alphabet > PSIS  
 PST *int* an interjection used to attract attention  
 PUB *n* a public house  $\pi$  *vb* to visit a pub > PUBS, PUBBING, PUBBED  
 PUD *n* pudding > PUDS  
 PUG *n* clay, ground and worked with water  $\pi$  *vb* to fill in with clay or mortar > PUGS, PUGGING, PUGGED  
 PUH *int* an interjection expressing disgust  
 PUL *n* a coin of Afghanistan > PULS or PULI  
 PUN *n* a play on words  $\pi$  *vb* to make a pun > PUNS, PUNNING, PUNNED  
 PUP *n* a young dog  $\pi$  *vb* to give birth to puppies > PUPS, PUPPING, PUPPED  
 PUR *vb* to make a sound like a cat > PURS, PURRING, PURRED  
 PUS *n* a thick yellowish bodily fluid associated with infection > PUSES, PUSSY  
 PUT *vb* to place; to throw > PUTS, PUTTING, PUT  
 PUY *n* a small volcanic cone > PUYS  
 PWN *vb* to dominate or humiliate an opponent, especially in online gaming > PWNS, PWINING, PWNED  
 PYA *n* a copper coin of Burma > PYAS  
 PYE *vb* to reduce to confusion > PYES, PYEING, PIED  
 PYX *n* a box at the Mint in which sample coins are kept for testing  $\pi$  *vb* to test a coin > PYXES, PYXING, PYXED  
 QAT *n* a shrub of E. Africa, Arabia, etc. or its leaves, chewed or taken as tea for their stimulant effect > QATS  
 QIN *n* a kind of Chinese zither with silken strings > QINS  
 QIS *pl* < QI, the physical life-force postulated by certain Chinese philosophers  
 QUA *prep* in the capacity of  
 RAD *adj* an old word for afraid > RADDER, RADDEST  $\pi$  *n* a unit of radiation dosage  $\pi$  *vb* to fear > RADS, RADDING, RADDED  
 RAG *n* a worn scrap of cloth  $\pi$  *vb* to tease or ridicule > RAGS, RAGGING, RAGGED  
 RAH *int* an interjection expressing joy  $\pi$  *n* a shout of rah  $\pi$  *vb* to express joy with a shout of rah > RAHS, RAHING, RAHED  
 RAI *n* a modern N. African form of popular music > RAIS  
 RAJ *n* in India, sovereignty > RAJES  
 RAM *n* a male sheep  $\pi$  *vb* to push or cram down hard > RAMS, RAMMING, RAMMED  
 RAN *vb* past tense of RUN, to move quickly  
 RAP *n* a sharp blow  $\pi$  *vb* to strike sharply > RAPS, RAPPING, RAPPED  
 RAS *n* a headland; an Ethiopian prince > RASES  
 RAT *n* a genus of rodents  $\pi$  *vb* to hunt rats > RATS, RATTING, RATTED  
 RAV *n* a rabbi, especially one in authority; a teacher or mentor > RAVS  
 RAW *adj* uncooked > RAWER, RAWEST, RAWLY  $\pi$  *n* a sore or irritated spot > RAWS  
 RAX *vb* to stretch > RAXES, RAXING, RAXED  
 RAY *n* a line along which light or other energy, or a stream of particles, is propagated  $\pi$  *vb* to emit rays > RAYS, RAYING, RAYED  
 REB *n* short for rebel, especially a Confederate soldier in the American Civil War > REBS  
 REC *n* a recreation ground > RECS  
 RED *adj* of a colour like blood > REDDER, REDDEST, REDLY  $\pi$  *n* the colour of blood  $\pi$  *vb* to put in order > REDS, REDDING, REDDED  
 REE *n* an enclosure for sheep > REES  
 REF *n* short for referee  $\pi$  *vb* to referee > REFS, REFFING, REFFED  
 REG *n* short for registration (number) > REGS  
 REH *n* an accumulation of salts on soil > REHS  
 REI *n* a Portuguese coin > REIS  
 REM *n* a unit of radiation dosage > REMS  
 REN *vb* an old form of run > RENS, RENNING, RENNED  
 REO *n* a Maori word for language > REOS  
 REP *n* a (sales) representative  $\pi$  *vb* to work as a sales representative > REPS, REPPING, REPPED  
 RES *n* short for (a Native American) reservation > RESES  
 RET *vb* to soak flax > RETS, RETTING, RETTED  
 REV *n* a revolution in an internal combustion engine  $\pi$  *vb* to increase the speed of revolution > REVS, REVVING, REVVED  
 REW *n* a row > REWS  
 REX *n* an animal with a single layer of hair > REXES; a king > REGES  
 REZ *n* short for (a Native American) reservation > REZZES

RHO *n* a letter of the Greek alphabet > RHOS  
 RHY *n* an old form of rye > RHIES  
 RIA *n* a drowned valley > RIAS  
 RIB *n* a bone curving forward from the backbone  $\pi$  *vb* to tease > RIBS, RIBBING, RIBBED  
 RID *vb* to free or clear > RIDS, RIDDING, RIDDED  
 RIF *vb* to dismiss from employment > RIFS, RIFFING, RIFFED  
 RIG *n* an outfit; garb  $\pi$  *vb* to fit with sails; to equip or clothe > RIGS, RIGGING, RIGGED  
 RIM *n* an edge, border, brim  $\pi$  *vb* to provide with a rim > RIMS, RIMMING, RIMMED  
 RIN *vb* a Scots form of run > RINS, RINNING, RUN, RAN  
 RIP *n* a tear  $\pi$  *vb* to tear open or apart > RIPS, RIPPING, RIPPED or (obs.) RIPT  
 RIT *n* a scratch, a slit  $\pi$  *vb* to score or scratch > RITS, RITTING, RITTED  
 RIZ *vb* a US past tense of RISE, to move upward  
 ROB *vb* to steal > ROBS, ROBBING, ROBBED  
 ROC *n* an enormous bird of Arabian legend > ROCS  
 ROD *n* a slender bar of metal or other matter  $\pi$  *vb* to push a rod through > RODS, RODDING, RODDED  
 ROE *n* a mass of fish eggs > ROES, ROED  
 ROK *n* an enormous bird of Arabian legend > ROKS  
 ROM *n* a gypsy man > ROMA or ROMS  
 ROO *n* shot for kangaroo > ROOS  
 ROT *n* decay; nonsense  $\pi$  *vb* to decay > ROTS, ROTTING, ROTTED  
 ROW *n* a noise; an argument  $\pi$  *vb* to quarrel; to propel through water with oars > ROWS, ROWING, ROWED  
 RUB *n* the act of rubbing; a hitch  $\pi$  *vb* to apply friction > RUBS, RUBBING, RUBBED; a Scots word for rob > RUBS, RUBBING, RUBBET, RUBBIT  
 RUC *n* an enormous bird of Arabian legend > RUCS  
 RUD *n* an old word meaning redness of complexion  $\pi$  *vb* a Spenserian word meaning to redden > RUDS, RUDDING, RUDDED  
 RUE *n* repentance, regret  $\pi$  *vb* to regret > RUES, RUING or RUEING, RUED  
 RUG *n* a heavy floor-mat  $\pi$  *vb* a Scots word meaning to pull roughly > RUGS, RUGGING, RUGGED  
 RUM *adj* odd, droll > RUMMER, RUMMEST, RUMLY  $\pi$  *n* a spirit distilled from sugar-cane > RUMS  
 RUN *n* a gait faster than a walk  $\pi$  *vb* to move quickly; to organise and/or control > RUNS, RUNNING, RUN, RAN  
 RUT *n* a furrow made by a wheel  $\pi$  *vb* to make a furrow with a wheel > RUTS, RUTTING, RUTTED  
 RYA *n* a type of Scandinavian rug > RYAS  
 RYE *n* a cereal grass; its grain > RYES  
 RYU *n* a school of Japanese martial arts > RYUS  
 SAB *n* a saboteur  $\pi$  *vb* to act as a saboteur; also, a Scots word for sob > SABS, SABBING, SABBED  
 SAC *n* in biology, a bag-like structure > SACS  
 SAD *adj* unhappy, sorrowful > SADDER, SADDEST, SADLY  $\pi$  *vb* to express sadness > SADS, SADDING, SADDLED  
 SAE *adv* a Scots word for so  
 SAG *n* a downward hang  $\pi$  *vb* to bend or hang down > SAGS, SAGGING, SAGGED  
 SAI *n* the capuchin monkey > SAIS  
 SAL *n* a large N. Indian tree > SALS  
 SAM *adv* together  $\pi$  *vb* to gather > SAMS, SAMMING, SAMMED  
 SAN *n* a discarded letter of the Greek alphabet > SANS  
 SAP *n* a liquid circulating through plants  $\pi$  *vb* to drain > SAPS, SAPPING, SAPPED  
 SAR *vb* a Scots word for savour > SARS, SARING, SARED  
 SAT *vb* past tense of SIT, to rest on the buttocks  
 SAU *n* a Vietnamese monetary unit > SAU  
 SAV *n* short for saveloy, a highly seasoned sausage > SAVS  
 SAW *n* a cutting tool with a toothed blade  $\pi$  *vb* to cut with a saw > SAWS, SAWING, SAWN, SAWED  
 SAX *n* a chopper for trimming slate > SAXES  
 SAY *vb* to utter in words, speak > SAYS, (coll.) SEZ, (obs.) SAYST, (obs.) SAYEST, (obs.) SAITH, (obs.) SAYNE, SAYING, SAID, SED, (obs.) SAIDST, (obs.) SAIDEST; to assay > SAYS, SAYING, SAYED  
 SAZ *n* a stringed instrument of N. Africa > SAZES or SAZZES  
 SEA *n* a great expanse of water > SEAS  
 SEC *n* short for second, a unit of time measurement > SECS  
 SED *vb* an old form of said  
 SEE *vb* to perceive by the eye > SEES, SEEING, SEEN, SAW  
 SEG *n* a stud in the sole of a shoe > SEGS  
 SEI *n* a kind of rorqual whale > SEIS  
 SEL *n* self > SELS  
 SEN *n* a Japanese monetary unit > SEN

SER *n* a unit of weight in India > SERS  
SET *vb* to put or place in position > SETS, SETTING, SET  
SEV *n* an Indian food of deep fried strands of flour > SEVS  
SEW *vb* to work on with a needle and thread > SEWS, SEWING, SEWN, SEWED  
SEX *n* the quality of being male or female  $\pi$  *vb* to identify the sex of > SEXES, SEXING, SEXED  
SEY *n* a part of a carcass of beef > SEYS  
SEZ *vb* colloquial 3<sup>rd</sup> person singular of SAY  
SHA *int* an interjection requesting silence  
SHE *pron* a pronoun used in referring to female person or thing > SHES  
SHH *int* an interjection requesting silence  
SHO *adj* a nonstandard spelling of sure, representing its pronunciation in the Southern United States  
SHY *adj* embarrassed, bashful > SHIER or SHYER, SHIEST or SHYEST, SHILY or SHYLY  $\pi$  *n* a sudden swerving aside  $\pi$  *vb* to jump aside, recoil > SHIES, SHYING, SHIED  
SIB *n* a blood relation, a kinsman > SIBS  
SIC *adv* literally  $\pi$  *vb* to incite a dog to attack > SICS, SICING or SICKING, SICCED or SICKED  
SIF *adj* syphilitic, nasty  
SIG *n* a signature at the end of an email > SIGS  
SIK *adj* an Australian slang word for excellent  
SIM *n* short for simulation or for Simeonite, an evangelical follower of Charles Simeon > SIMS  
SIN *n* a moral offence  $\pi$  *vb* to commit sin > SINS, SINNING, SINNED  
SIP *n* a small mouthful of liquid  $\pi$  *vb* to drink in small mouthfuls > SIPS, SIPPING, SIPPED  
SIR *n* a title of respect  $\pi$  *vb* to address as "sir" > SIRS, SIRRING, SIRRED  
SIS *n* short for sister > SISES  
SIT *vb* to rest on the buttocks > SITS, SITTING, SAT or (obs.) SATE, SITTEN  
SIX *n* the next whole number after five > SIXES  $\pi$  *adj* of the number six  
SKA *n* a form of Jamaican music similar to reggae > SKAS  
SKI *n* a narrow strip attached to a boot for gliding over snow  $\pi$  *vb* to move on skis > SKIS, SKIING, SKIED  
SKY *n* the apparent canopy over our heads  $\pi$  *vb* to hit towards the sky > SKIES, SKYING, SKIED or SKYED  
SLY *adj* cunning, wily; surreptitious > SLIER or SLYER, SLIEST or SLYEST, SLILY or SLYLY  
SMA *adj* a Scots word for small  
SNY *n* a side channel of a river > SNIES  
SOB *n* a convulsive catch of the breath  $\pi$  *vb* to cry uncontrollably, taking intermittent breaths > SOBS, SOBBING, SOBBED  
SOC *n* the right of holding a local court > SOCS  
SOD *n* a piece of turf  $\pi$  *vb* to cover with sods of turf > SODS, SODDING, SODDED  
SOG *n* a wet place  $\pi$  *vb* to soak > SOGS, SOGGING, SOGGED  
SOH *n* a musical note > SOHS  
SOL *n* a musical note > SOLS  
SOM *n* the standard monetary unit of Kyrgyzstan > SOMS or SOMY  
SON *n* a male offspring > SONS  
SOP *n* bread or other food dipped or soaked in liquid  $\pi$  *vb* to soak > SOPS, SOPPING, SOPPED  
SOS *pl* < SO, a musical note  
SOT *n* a habitual drunkard  $\pi$  *vb* to play the sot > SOTS, SOTTING, SOTTED  
SOU *n* an old small French coin > SOUS  
SOV *n* sovereign, a gold coin > SOVS  
SOW *n* a female pig  $\pi$  *vb* to scatter seed on the ground > SOWS, SOWING, SOWED, SOWN  
SOX *pl* socks  
SOY *n* a dark, salty sauce made from fermented beans > SOYS  
SOZ *int* sorry  
SPA *n* a resort with a mineral spring  $\pi$  *vb* to stay at a spa > SPAS, SPAING, SPAED  
SPY *n* a secret agent employed to watch  $\pi$  *vb* to watch secretly > SPIES, SPYING, SPIED or (obs.) SPIDE  
SRI *n* in India, a title of great respect given to a man > SRIS  
STY *n* a home for a pig  $\pi$  *vb* to keep in a sty > STIES or STYES, STYING, STIED or STYED  
SUB *n* short for submarine, subscription, substitution  $\pi$  *vb* to subscribe, substitute etc > SUBS, SUBBING, SUBBED  
SUD *n* a rare singular form of suds, a froth of soapy water > SUDS  
SUE *vb* to prosecute at law > SUES, SUING, SUED  
SUG *vb* to attempt to sell a product while purporting to be engaged in market research > SUGS, SUGGED, SUGGING  
SUI *pron* of himself, itself  
SUK *n* an Arab market place > SUKS  
SUM *n* the total, whole amount  $\pi$  *vb* to add, make up the total of > SUMS, SUMMING, SUMMED

SUN *n* the star that is the source of light ▫ *vb* to expose to the sun's rays > SUNS, SUNNING, SUNNED  
SUP *n* a small mouthful ▫ *vb* to take liquid into the mouth > SUPS, SUPPING, SUPPED  
SUQ *n* an Arab market place > SUQS  
SUR *prep* a French word meaning on, above  
SUS *n* a suspect > SUSES ▫ *vb* to arrest for suspicious behaviour > SUSSES, SUSSING, SUSSED  
SWY *n* the Australian game of two-up > SWIES  
SYE *vb* to strain > SYES, SYEING, SYED  
SYN *prep* since  
TAB *n* a small tag or flap ▫ *vb* to affix a tab to > TABS, TABBING, TABBED  
TAD *n* a small amount > TADS  
TAE *n* a Scots word for toe ▫ *vb* to toe > TAES, TAEING, TAED  
TAG *n* a tab or label ▫ *vb* to put a tag on > TAGS, TAGGING, TAGGED  
TAI *n* a Japanese sea bream > TAIS  
TAJ *n* a crown, a Dervish's tall conical cap > TAJES  
TAK *vb* a Scots form of take > TAKS, TAKING, TAKEN, TOOK  
TAM *n* a cap with a broad, circular flat top > TAMS  
TAN *adj* brown > TANNER, TANNEST ▫ *n* a brown colour from sunbathing ▫ *vb* to become brown in the sun > TANS, TANNING, TANNED  
TAO *n* a path of virtuous conduct in Chinese philosophy > TAOS  
TAP *n* a gentle knock or its sound ▫ *vb* to knock gently > TAPS, TAPPING, TAPPED  
TAR *n* a black bituminous substance ▫ *vb* to coat with tar > TARS, TARRING, TARRED  
TAS *pl* < TA, a thank-you  
TAT *n* odds and ends of little real value ▫ *vb* to touch up > TATS, TATTING, TATTED  
TAU *n* a letter of the Greek alphabet > TAUS  
TAV *n* a letter of the Hebrew alphabet > TAVS  
TAW *vb* to prepare skins for white leather > TAWS, TAWING, TAWED  
TAX *n* a contribution levied towards a country's revenue ▫ *vb* to impose a tax on > TAXES, TAXING, TAXED  
TAY *n* a dialect word for tea > TAYS  
TEA *n* a beverage; an afternoon meal or light refreshment at which tea is generally served ▫ *vb* to take tea > TEAS, TEAING, TEAED  
TEC *n* a detective > TECS  
TED *vb* to spread out grass for drying > TEDS, TEDDING, TEDDED  
TEE *n* a small plastic or wooden support for a golf ball ▫ *vb* to place a golf ball on a tee > TEES, TEEING, TEED  
TEF *n* an Ethiopian cereal grass > TEFS  
TEG *n* a sheep in its second year > TEGS  
TEL *n* in Arab lands, a hill or ancient mound formed from the accumulated debris from earlier mud or wattle habitations > TELS  
TEN *n* the next whole number after nine > TENS ▫ *adj* of the number ten  
TES *pl* < TE, a musical note  
TET *n* a letter of the Hebrew alphabet > TETS  
TEW *vb* to hustle > TEWS, TEWING, TEWED  
TEX *n* a unit of weight used to measure the density of yarn > TEXES  
THE *adj* the definite article  
THO *adj* a Spenserian form of hose  
THY *adj* of thee  
TIC *n* an involuntary twitching of muscles ▫ *vb* to twitch > TICS, TICGING, TICCED  
TID *n* a mood > TIDS  
TIE *vb* to fasten > TIES, TIEING or TYING, TIED or (Spenser) TYDE  
TIG *n* a touch, a game of 'it' ▫ *vb* to touch > TIGS, TIGGING, TIGGED  
TIK *n* the drug methamphetamine in crystal form > TIKS  
TIL *n* the sesame plant > TILS  
TIN *n* a metallic element > ▫ *vb* to coat with tin > TINS, TINNING, TINNED  
TIP *n* a gratuity; a helpful piece of advice ▫ *vb* to give a tip > TIPS, TIPPING, TIPPED or (obs.) TIPT  
TIS *pl* < TI, a small Pacific tree with sword-shaped leaves  
TIT *n* any of various kinds of small songbirds of the family Paridae ▫ *vb* to tug > TITS, TITTING, TITTED  
TIX *pl* tickets  
TIZ *n* a state of confusion, > TIZES, TIZZES  
TOC *n* telecommunications code for the letter T > TOCS  
TOD *n* a weight used in the wool trade, usually 28 pounds or 2 stone ▫ *vb* to yield a tod > TODS, TODDING, TODDED  
TOE *n* a digit on the end of a foot ▫ *vb* to kick or touch with the toes > TOES, TOEING, TOED

TOG *n* a garment, an item of clothing  $\pi$  *vb* to dress > TOGS, TOGGING, TOGGED  
 TOM *n* a male cat  $\pi$  *vb* to engage in prostitution > TOMS, TOMMING, TOMMED  
 TON *n* a unit of weight equivalent of twenty hundredweight > TONS  
 TOO *adv* as well, in addition; to a greater extent than is required  
 TOP *n* the highest point  $\pi$  *vb* to cover the top; to surpass > TOPS, TOPPING, TOPPED  
 TOR *n* a hill, a rocky height > TORS  
 TOT *n* a small child or drink  $\pi$  *vb* to add or total > TOTS, TOTTING, TOTTED  
 TOW *n* fibres of flax, jute or hemp  $\pi$  *vb* to pull along (behind) > TOWS, TOWING, TOWED  
 TOY *n* an object for playing with  $\pi$  *vb* to play idly with > TOYS, TOYING, TOYED  
 TRY *n* an attempt  $\pi$  *adj* choice, purified  $\pi$  *vb* to attempt; to make an effort > TRIES, TRYING, TRIED or (obs.) TRIDE  
 TSK *int* to utter such an exclamation of annoyance > TSKS, TSKING, TSKED  
 TUB *n* an open container, originally of wooden staves and hoops  $\pi$  *vb* to bathe in a tub > TUBS, TUBBING, TUBBED  
 TUG *n* a forcible or jerking pull  $\pi$  *vb* to pull forcibly > TUGS, TUGGING, TUGGED  
 TUI *n* a New Zealand bird, a honey guide > TUIS  
 TUM *n* the stomach > TUMS  
 TUN *n* a large cask  $\pi$  *vb* to put in a tun > TUNS, TUNNING, TUNNED  
 TUP *vb* of a ram, to copulate > TUPS, TUPPING, TUPPED  
 TUT *int* an exclamation of rebuke  $\pi$  *vb* to say tut > TUTS, TUTTING, TUTTED  
 TUX *n* tuxedo, a dinner jacket > TUXES  
 TWA *adj* a Scots form of two > TWAS  
 TWO *n* the next whole number after one > TWOS  $\pi$  *adj* of the number two  
 TWP *adj* dim-witted or stupid  
 TYE *n* an inclined trough for washing ore  $\pi$  *vb* to wash in a tye trough > TYES, TYEING, TYED  
 TYG *n* an old drinking-cup with two or more handles > TYGS  
 UDO *n* a Japanese species of aralia > UDOS  
 UDS *int* an old interjection meaning 'God Save'  
 UEY *n* a U-turn > UEYS  
 UFO *n* an unidentified flying object > UFOS  
 UGH *int* an old representation of a cough or grunt > UGHS  
 UGS *vb* 3<sup>rd</sup> person singular present form of UG, to loathe  
 UKE *n* short for ukulele > UKES  
 ULE *n* a Central American rubber tree > ULES  
 ULU *n* an Inuit knife > ULUS  
 UMM *int* an interjection expressing doubt or hesitation  
 UMP *n* short for umpire  $\pi$  *vb* to umpire > UMPS, UMPING, UMPED  
 UMS *vb* 3<sup>rd</sup> person singular present form of UM, to say um  
 UMU *n* a type of Maori oven > UMUS  
 UNI *n* short for university > UNIS  
 UNS *pl* < UN, one  
 UPO *prep* upon  
 UPS *vb* 3<sup>rd</sup> person singular present form of UP, to move up  
 URB *n* an urban area > URBS  
 URD *n* an Indian bean > URDS  
 URE *n* an extinct wild ox > URES  
 URN *n* a vase for the ashes of the dead  $\pi$  *vb* to place in an urn > URNS, URNING, URNED  
 URP *vb* to vomit > URPS, URPING, URPED  
 USE *n* the fact or state of serving a purpose  $\pi$  *vb* to put to some purpose > USES, USING, USED  
 UTA *n* any of a genus of large lizards > UTAS  
 UTE *n* a utility, a small truck > UTES  
 UTS *pl* < UT, a musical note  
 UTU *n* a Maori settlement of a debt > UTUS  
 UVA *n* a grape or grape-like berry > UVAE or UVAS  
 VAC *n* a vacation  $\pi$  *vb* to clean with a vacuum cleaner > VACS, VACKING, VACKED  
 VAE *n* in Orkney or Shetland, a bay or creek > VAES  
 VAG *vb* to arrest someone for vagrancy > VAGS, VAGGING, VAGGED  
 VAN *n* a light vehicle used in transporting goods  $\pi$  *vb* to go or send in a van > VANS, VANNING, VANNED  
 VAR *n* a unit of reactive power > VARS  
 VAS *n* a duct carrying liquid > VASA  
 VAT *n* a large vessel or tank  $\pi$  *vb* to put or treat in a vat > VATS, VATTING, VATTED  
 VAU *n* an obsolete letter in the Greek alphabet > VAUS  
 VAV *n* a letter of the Hebrew alphabet > VAVS

VAW *n* a letter of the Hebrew alphabet > VAWS  
 VEE *n* the letter V > VEES  
 VEG *n* short for vegetable > VEGES  $\alpha$  *vb* to laze about, to engage in mindless activity > VEGGES, VEGGED, VEGGING  
 VET *n* an animal doctor  $\alpha$  *vb* to examine closely > VETS, VETTING, VETTED  
 VEX *vb* to distress or annoy > VEXES, VEXING, VEXED or (obs.) VEXT  
 VIA *adv* by way of  $\alpha$  *n* a road > VIAE or VIAS  
 VID *n* a short form of video > VIDS  
 VIE *vb* to contend in rivalry > VIES, VYING, VIED  
 VIG *n* short for vigorish, a charge paid to a bookie on a bet > VIGS  
 VIM *n* energy, vigour > VIMS  
 VIN *n* wine > VINS  
 VIS *n* force > VIRES  
 VLY *n* low-lying ground where a shallow lake forms in the wet season > VLIES  
 VOE *n* in Orkney or Shetland, a bay or creek > VOES  
 VOG *n* air pollution caused by volcanic dust > VOGS  
 VOL *n* in heraldry, two wings displayed and conjoined > VOLS  
 VOM *vb* to vomit > VOMS, VOMMING, VOMMED  
 VOR *vb* to warn > VORS, VORRING, VORRED  
 VOW *n* a solemn promise  $\alpha$  *vb* to make a vow or vows > VOWS, VOWING, VOWED  
 VOX *n* a voice > VOCES  
 VUG *n* a small unfilled cavity in a lode or in rock > VUGS  
 VUM *vb* to vow > VUMS, VUMMING, VUMMED  
 WAB *n* an old form of web > WABS  
 WAD *n* a pad of loose material used for packing  $\alpha$  *vb* to form into a wad > WADS, WADDING, WADDED  
 WAE *n* a Scots form of woe > WAES  
 WAG *n* a sideways movement; a droll person  $\alpha$  *vb* to move from side to side > WAGS, WAGGING, WAGGED  
 WAI *n* a Maori word for water > WAIS  
 WAN *adj* pale > WANNER, WANNEST, WANLY  $\alpha$  *vb* to make or become wan > WANS, WANNING, WANNED  
 WAP *vb* to throw or pull quickly > WAPS, WAPPING, WAPPED  
 WAR *n* a state of conflict  $\alpha$  *vb* to make war > WARS, WARRING, WARRED  $\alpha$  *adj* an old form of worse > WARST, WAURST  
 WAS *vb* a past tense of BE, to exist  
 WAT *n* a Thai Buddhist temple or monastery > WATS  
 WAW *n* an old word for wave > WAWS  
 WAX *n* a fatty substance  $\alpha$  *vb* to treat with wax; to grow larger > WAXES, WAXING, WAXED or (obs.) WOX or WOXEN  
 WAY *n* a route  $\alpha$  *vb* (Spenser) to weigh, esteem > WAYS, WAYING, WAYED  
 WAZ *vb* to urinate > WAZZES, WAZZING, WAZZED  
 WEB *n* a fine structure spun by a spider  $\alpha$  *vb* to envelop with a web > WEBS, WEBBING, WEBBED  
 WED *vb* to marry > WEDS, WEDDING, WEDDED  
 WEE *adj* small > WEER, WEEST  $\alpha$  *n* urine  $\alpha$  *vb* to urinate > WEES, WEEING, WEED  
 WEM *n* the womb or belly > WEMS  
 WEN *n* a sebaceous cyst > WENS  
 WET *adj* not dry > WETTER, WETTEST, WETLY  $\alpha$  *vb* to make wet > WETS, WETTING, WETTED  
 WEX *vb* to wax, grow > WEXES, WEXING, WEXED  
 WEY *n* a measure for dry goods > WEYS  
 WHA *pron* a Scots form of who  
 WHO *pron* a pronoun used in referring to a person or people  
 WHY *adv* for what cause or reason  $\alpha$  *n* the reason or cause of something > WHYS  
 WIG *n* an artificial covering of hair for the head  $\alpha$  *vb* to scold; to provide with a wig > WIGS, WIGGING, WIGGED  
 WIN *vb* to gain > WINS, WINNING, WON; to winnow > WINS, WINNING, WINNED  
 WIS *vb* a sham archaic word for to know  
 WIT *n* intelligence; humour  $\alpha$  *vb* to know > WITS, WITTING, WITTED  
 WIZ *n* a very skilful person > WIZES or WIZZES  
 WOE *n* misery > WOES  
 WOF *n* Australian slang for fool, idiot > WOFs  
 WOG *n* a nonwhite foreigner > WOGS  
 WOK *n* a pan used in Chinese cookery > WOKS  
 WON *vb* to dwell > WONS, WONNING, WONNED or WONT  
 WOO *vb* to court; to seek the support of > WOOS, WOOING, WOOED

**WOP** *n* an offensive word for a member of a Mediterranean or Latin race, eg an Italian  $\pi$  *vb* to thump > WOPS, WOPPING, WOPPED  
**WOS** *pl* < WO, woe  
**WOT** *vb* an old word for know > WOTS, WOTTEST, WOTTETH, WOTTING, WOTTED  
**WOW** *int* an exclamation of wonder  $\pi$  *n* a success  $\pi$  *vb* to impress > WOWS, WOWING, WOWED  
**WOX** *vb* an old past tense of WAX, to grow  
**WRY** *adj* twisted > WRIER or WRYER, WRIEST or WRYEST  $\pi$  *vb* to give a twist to > WRIES, WRYING, WRIED  
**WUD** *n* wood  $\pi$  *vb* to load with wood > WUDS, WUDDING, WUDDER  
**WUS** *n* a Welsh term used for addressing a companion > WUSES  
**WUZ** *vb* a nonstandard spelling of was, representing dialect or informal pronunciation  
**WYE** *n* the letter Y; a Y-shaped pipe > WYES  
**WYN** *n* a rune, having the value of modern English W > WYNS  
**XED** *vb* crossed out (past tense of verb to x)  
**XIS** *pl* < XI, a Greek letter  
**YAD** *n* a hand-held pointer used for reading the Torah > YADS  
**YAE** *adj* a Scots word meaning one, very or same  
**YAG** *n* a type of synthetic garnet containing yttrium and aluminium, used in lasers and as a gem > YAGS  
**YAH** *adv* a variant of yea, an affirmative vote  $\pi$  *n* an affected upper-class person > YAHS  
**YAK** *n* a species of ox found in Tibet  $\pi$  *vb* to talk persistently > YAKS, YAKKING, YAKKED  
**YAM** *n* a sweet potato > YAMS  
**YAP** *n* a sharp bark  $\pi$  *vb* to bark sharply or constantly > YAPS, YAPPING, YAPPED  
**YAR** *adj* an old word meaning nimble > YARER, YAREST  
**YAS** *pl* < YA an Asian pear  
**YAW** *vb* of eg a plane, to move from right to left in a horizontal plane > YAWS, YAWING, YAWED  
**YAY** *int* an exclamation of joy, approbation, encouragement etc  $\pi$  *n* an affirmative vote > YAYS  
**YEA** *adv* yes  $\pi$  *n* an affirmative vote > YEAS  
**YEH** *int* yes  
**YEN** *n* a Japanese unit of currency  $\pi$  *vb* to desire or yearn > YENS, YENNING, YENNED  
**YEP** *int* yes > YEPS  
**YER** *int* your; you  
**YES** *n* an affirmative reply > YESES or YESSSES  $\pi$  *vb* to give an affirmative reply to > YESSSES, YESSING, YESSED  
**YET** *adv* in addition, besides; nevertheless  
**YEW** *n* a type of evergreen tree > YEWS  
**YEX** *vb* to hiccup or belch > YEXES, YEXING, YEXED  
**YEZ** *int* yes  
**YGO** *vb* a Spenserian past tense of GO, to pass from one place to another  
**YID** *n* an offensive term for a Jew > YIDS  
**YIN** *n* a Scots word for one > YINS  
**YIP** *vb* to give a short, sudden cry > YIPS, YIPPING, YIPPED  
**YOB** *n* a lout > YOBS  
**YOD** *n* a Hebrew letter > YODS  
**YOK** *vb* to laugh > YOKS, YOKKING, YOKKED  
**YOM** *n* a Jewish day, especially in a religious context > YOMIM  
**YON** *adj* that, those  $\pi$  *adv* yonder  $\pi$  *pron* that one  
**YOU** *pron* pronoun referring to the person being addressed > YOUS  
**YOW** *vb* to yowl, howl > YOWS, YOWING, YOWED  
**YUG** *n* one of the four Hindu ages of the world > YUGS  
**YUK** *vb* an unpleasant mess  $\pi$  *vb* to itch > YUKS, YUKKING, YUKKED  
**YUM** *int* an interjection expressing satisfaction  
**YUP** *int* yes > YUPS  
**YUS** *pl* < YU, a kind of jade  
**ZAG** *n* a new line, or sharp change, of direction on a zigzag course  $\pi$  *vb* to change direction on a zig-zag course > ZAGS, ZAGGING, ZAGGED  
**ZAP** *vb* to destroy > ZAPS, ZAPPING, ZAPPED  
**ZAS** *pl* < ZA, pizza  
**ZAX** *n* a chopper for trimming slate > ZAXES  
**ZEA** *n* part of a cereal, once used as a diuretic > ZEAS  
**ZED** *n* the letter Z > ZEDS  
**ZEE** *n* in the US, the letter Z > ZEES  
**ZEK** *n* an inmate of a labour camp in the former USSR > ZEKS  
**ZEL** *n* an oriental cymbal > ZELS

ZEP *n* a long sandwich > ZEPS  
ZEX *n* a chopper for trimming slate > ZEXES  
ZHO *n* a cross between a yak and a cow > ZHOS  
ZIG *vb* to change direction on a zigzag course > ZIGS, ZIGGING, ZIGGED  
ZIN *n* zinfandel, a kind of grape > ZINS  
ZIP *n* a kind of fastener; energy ▫ *vb* to fasten with a zip > ZIPS, ZIPPING, ZIPPED  
ZIT *n* a pimple > ZITS  
ZIZ *n* a nap or sleep ▫ *vb* to take a nap > ZIZZES, ZIZZING, ZIZZED  
ZOA *pl* < ZOON, a unified individual creature  
ZOL *n* S. African slang for a cannabis cigarette > ZOLS  
ZOO *n* a garden or park where animals are kept > ZOOS  
ZOS *pl* < ZO, a cross between a yak and a cow  
ZUZ *n* an ancient Palestinian coin > ZUZIM or ZUZZIM  
ZZZ *int* an interjection expressing sleep