## The ScrabBlE ${ }^{\circledR}$ PlayER's

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## The Scrabble Player's Handbook

## Welcome!

This book has been written by a dozen of the world's leading Scrabble players, all of whom have competed in past World Scrabble Championships and many other major international tournaments. 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 improving to expert status. We'll start off with the basics of competitive Scrabble and end up covering 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 for both players. If crazy words with obscure meanings put you off then you may well be reading the wrong book; this is very different from Scrabble with granny at Christmas. Contrary to some people's belief that learning useful Scrabble vocabulary "takes the fun out of the game", the authors of this book know how much fun it can be to lay down a bizarre-looking combination of letters in the knowledge 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 $1 \%$ that are excellent at something, this book will teach you how.

Whether you're an online Scrabble fan wanting a few tips to help beat your friends or whether you're curious about taking your Scrabble to "the next level", we hope you get as much enjoyment out of this book as we have from writing it. Please help us to share our love of the game by distributing this book to anyone who might benefit from it; it is a gift to all Scrabble lovers across the world from the people 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 and the premium squares and how move scores are calculated. If you're not, a quick web search will find the standard Scrabble rules on a variety of websites.

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 $7^{\text {th }}$ 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 $7^{\text {th }}$ row, while a word at ( d 7 ) 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.

## Meet The Team

## Stewart Holden (editor) <br> 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 $28^{\text {th }}$ 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.

## Evan Berofsky <br> Canada

I am 36, a Libra, and enjoy short walks off long piers. I currently live in Toronto, Canada, but will soon be moving to Oxford, Michigan for marital reasons and shoddier health coverage. While in the US, I will continue my jobs of logistics analyst and freelance sports writer (surprisingly not related).

Since I've started playing 'professionally' 15 years ago, I have won more than 30 tournaments. This doesn't include the nine times l've taken the Toronto Club championship season title. I have also represented Canada twice at the WSC $(2003,2007)$, finishing with an
 even win-loss record in both events.

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).

## 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 for well over twenty years, witnessing many changes in the lexicon and playing environment - mostly for the better. My first international event was the 1991 WSC, and I have taken part in every edition except 1993; domestically I have

[^2]
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 I have been on the board of WESPA as Treasurer since its formation. I also enjoy solving and setting tough cryptic crosswords, and have had several of my own published (including ten to date in the 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.

## Paul Gallen

Northern Ireland
My major Scrabble achievements to date have been finishing 8th in WSC 2011, 4th in Causeway Challenge 2010, four Northern Ireland Championship titles, one All Ireland Championship and holding the title of current UK National Champion (2012).

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.


## 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 bestselling 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 the 2008 CanAm Challenge and the 2011 World Scrabble Championship. I live in the Washington, DC area and work as a computer programmer, occasionally also assisting Stefan Fatsis in organizing School Scrabble tournaments in the region.


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.

## Chris Lipe

USA
I'm a 33 year old computer programmer for the US government. Why do I play Scrabble? Mostly for the fame and glamor. 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 Player's Handbook is available for free download at www.scrabbleplayershandbook.com
the Scrabble thing into a reality TV show than some endeavor 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 l've found the people in the game, all over the world, to be a great group of friends.

## Edward Martin

England
I'm a 36 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!

## Kevin McMahon

Ireland


Hello, I'm Kevin McMahon, 27 years old, based in Cork, Ireland, where I'm training to be a physics teacher.

My Scrabble achievements: I've won many tournaments in Ireland, including the All Ireland Championship three times (2007, 2008 \& 2009). I was on the winning Irish team at the 2011 Four Nations tournament, where I also finished top of the individual standings. Most recently I won the 2012 BMSC (British Matchplay Scrabble Championship). I also represented Ireland at the 2009 WSC in Malaysia, which was one of the greatest experiences of my life despite a disappointing final result (65th).


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 more and more 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 l'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 31-year old public servant and freelance editor, based in Sydney, Australia. I have competed in four World Championships and I was runner up in the 2008 Causeway Challenge, at the time the world's longest tournament. I also won the 2011 and 2012 Australian Masters. I completed a Ph.D. that looked at Scrabble players as an example of a community of practice which fosters learning in its participants.

I play Scrabble because I love words, problem solving and mental combat - and a good game of Scrabble taxes a variety of intellectual faculties.


## Allan Simmons

## Scotland

After many years in the IT industry I am now a full-time Scrabble consultant (books, media puzzles/articles, courses, etc.). I was UK National Champion in 2008 and have won the BMSC four times and the ABSP Masters twice.

I first became aware of Scrabble, aged 15, at school, discovering that I was attracted to anagrams and word forms. A friend introduced me to playing Scrabble by post and the Games and Puzzles magazine of the 1970s and I became hooked on word-puzzling challenges. At school I had to persuade my teachers to allow me to take both art and mathematics at advanced level (it was not a normal option!) and I expect it was that interest in those subjects that Scrabble conjoined as a game. I
 saw words as an art form and enjoyed working out the strategies of the game using my grasp or probabilities (there was very little, if any, strategy written down anywhere at the time).

When I dared to play face-to-face Scrabble in the London League, aged 18, I was surprised that most players were relatively casual and didn't really bother to learn many new or unusual words apart from the twos and those that they picked up from others. Thus, I came in at the top end and found I was doing well without much extra effort (that certainly wouldn't be the case now where the starting bar is much higher).

One particular fascination was the belief that there could be a seven or eight-letter words hidden in most reasonably balanced racks (no anagram lists around at the time to know either way) and so after most playing session it was a question of spending hours flicking through the dictionary (Chambers) methodically seeing what bonus words were missed with likely racks.

I think perhaps I wouldn't have stuck at Scrabble if the I wasn't getting the buzz from 'winning' as a reward for effort.

## Brett Smitheram

## England

I'm a 33yr old headhunter for a London recruitment firm and have been playing Scrabble since I was 17. My Scrabble achievements include being 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 <br> USA

Scrabble achievements: 2nd in U.S. Nationals, 2006; competed in WSC in 2007, 2009 and 2011 (finished 21st, 21st and 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 about ten 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 l'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!

## Toh Weibin

Singapore
I'm a 22-year old student from Singapore. I have played competitive Scrabble since 2004, with minor 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; I was also honoured to represent my home country at the Worlds in 2011.

I play this game for a variety of reasons. I am continually charmed by the curious words used in the game - it always awes me when someone plays a word I have never seen before. 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 its international presence. I am most excited about visiting places, experiencing the different types of tournaments all over the world and meeting fellow Scrabble players. The sheer variety of players you encounter in an international tournament is amazing.


## 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 more formalised Scrabble play sometimes 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 before being put on the board has made it more difficult for new players to become accustomed to checking 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 do so.

There is no squabbling over whether a word should be allowed because one fixed word list is used to determine validity. The word authority used in competitive games is Collins Tournament and Club Word List (2012 edition); this is true for every country in the world 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 at the back of this book for the correct ISBN numbers.

All tournaments and some clubs use timers (commonly known as chess clocks) to make sure that games are finished in a reasonably timely manner and one overlong pairing of players 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 in total. 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!

## 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 all 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 $1 \mathrm{pt}, \mathrm{Q}$ is worth 10 pts , 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 suicidal 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 $20-30$ pts 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 would be better to take the lower score and retain the blank. You are simply not getting enough value out of the blank by only using it to gain 16 pts.

The same principle applies to the $S$, which has an actual value of around $8-10$ pts. 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 8 pts 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 11 pts will often prove to be a superior move than a $25-30$ pt 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 5 s 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 his 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.

## Passing

Beginners will sometimes spot the possibility of a spectacular move which is almost playable, if

[^3]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 a huge mistake and it is one of the easiest ways to identify yourself as a poor player.

Here's the main reason this strategy is so bad: If attempted on the opening move, any sensible opponent will 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 be a player who does not know that exchanging is the correct counter play to a pass, but as a general principle (in all cases), you should avoid making intentionally inferior plays simply to match your opponent's possible ignorance. Extensive computer analysis has shown that there is no opening rack in which passing is the correct play. Furthermore the game ends after six consecutive scores of zero and so this kind of silliness can lead to a game that is over before it has even started.

What about the opening move when you just need one floating (i.e. openly available) tile to play a really nice eight-letter word? The answer is still no! The closest candidate is the opening rack IORSTUV which does not form a bonus on its own but combines with all five vowels to make eightletter words; VIRTUOSA, VIRTUOSE/VITREOUS/VOITURES, VIRTUOSI, VIRTUOSO, VIRTUOUS respectively. However even with this rack there are better moves available such as VROU, VROUS or exchanging UV to keep the bonus-oriented IORST.

In a Scrabble endgame far greater knowledge of the opponent's rack comes into play (more on this later) and so the dynamics and rules of the game change dramatically. It is worth noting that there are situations in a tiny minority of endgames (far fewer than 1\%) in which some experts have put forward the argument that passing one's turn is strategically justifiable; such a situation occurs when there is one tile left in the bag, one player has a slight lead but playing any move would likely lead to a loss whereas a "six scores of zero" premature finish to the game would result in a win. In this position a pass is justifiable but such situations occur extremely rarely. In every other imaginable scenario, passing is a mistake.


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

[^4]
## The Words

Allan Simmons

"The word list is the bible for organized Scrabble. A word is either in the book or it isn't. Some players criticize it because the words are either too weird or too common. Others lament that it's not a real dictionary with definitions... but most get on with their Scrabble lives and leave the kvetching to others. They recognize that there has to be a standard. Anyone who has tried to play without one quickly realizes that." - Paul McCarthy, Letterati

Social home players may choose whatever dictionary they wish to play to, but for consistency across all clubs and tournaments there has to be a single word authority which is used as a Scrabble 'bible' to determine which words are allowed.

The word authority endorsed by the World English-language Scrabble Players Association (WESPA) and used by clubs and tournaments worldwide (with the exception of North America which has its own official wordlist) is Collins Official Scrabble Words (CSW). At the time of writing the current edition is the 2011 publication, adopted by the club and tournament movement from the start of 2012 and therefore referred to by players as CSW12.

CSW lists all valid words from 2-15 letters in length. For ease of use, the book is organised in two sections: words of 2-9 letters which will be the ones looked up the most, and words of 10-15 letters which one may be required to check from time to time. To date CSW has been updated about every five years using the latest editions of its sources.

## What is in it, and why?

CSW lists every word and their inflections (things like verb endings and plurals) as separate entries and in strict alphabetical order so there is no scope for misinterpretation. As an example, the list on the right shows how the words starting PLUMB will appear.

Note how far away PLUMBS is from the root verb PLUMB when in strict alphabetical order, and note that the plural forms PLUMBERIES and PLUMBNESSES will be in the separate 10-15 letter word section.

The words come from several published dictionary sources and the list also includes all words that are listed in the North American official Scrabble word list to make it a truly global Scrabble authority. As a result, CSW embraces a lot of English usage in English speaking countries around the world, as well as a range of dialect words from UK and words of historical interest from literature, such as Shakespeare and archaic usage.

PLUMB<br>PLUMBABLE<br>PLUMBAGO<br>PLUMAGOS<br>PLUMBATE<br>PLUMBATES<br>PLUMBED<br>PLUMBEOUS<br>PLUMBER<br>PLUMBERS<br>PLUMBERY<br>PLUMBIC<br>PLUMBING<br>PLUMBINGS<br>PLUMBISM<br>PLUMBISMS<br>PLUMBITE<br>PLUMBITES<br>PLUMBNESS<br>PLUMBOUS<br>PLUMBS<br>PLUMBUM<br>PLUMBUMS

## Do you need to know definitions?

It is probably true to say that most top players learn many thousands of words without any regard
to the definitions. In contrast, there are many social home players who believe that a player should know the meaning of words that they play. In the tournament and club movement across the world, there is no requirement to define words that are played. That is probably just as well because it would be both time-consuming and a nightmare to enforce fairly. The delightful OBANG, for example, is defined as "an old Japanese oblong gold coin". If a player had to define it to be able to play it, could any parts of the definition be left out and it still be passable? And what if it was misrecalled as a "square coin"? So you see, there can be no rule insisting on definitions.

Having said that, an interest in what the words mean can certainly help your Scrabble. It can aid recall and also allow you to make informed guesses as to whether a word can take an -S, behave as a verb, or perhaps take a Latin plural form. But if you want to improve your Scrabble vocabulary expediently it is best not to worry too much about what the unusual words mean.

For those who like to accumulate definitions when they look up words, there is a good hardback version of CSW with minimal definitions shown (see Books section).

## How do I know what is likely to be allowed?

The exact rules devised by the WESPA Dictionary Committee for determining which words are acceptable can be found in the Appendix, but the following key points are really all you need to be aware of.

As a general guide all singular nouns can have a plural form which for most will be the standard addition of $-S$ or $-E S$. Thus all the following plurals are allowed: APTNESSES OXYGENS TINWARES. If a word is of foreign origin it may well have a foreign plural instead of, or as well as, the standard English plural. That's why you'll find both SERUMS and SERA allowed as plurals of SERUM.

A lot of short adjectives of one syllable (e.g. LOOSE, BUTCH) or of two syllables ending in -Y (e.g. RUSTY, LAWNY) will take a comparative and superlative form in -ER, -EST. If you can imagine the word having various degrees to its definition, then it is most likely the comparative and superlative forms will be allowed. (e.g., LOOSER LOOSEST, BUTCHER, BUTCHEST, RUSTIER, RUSTIEST, LAWNIER, LAWNIEST).

There are plenty of slang words and contractions contained in the word list. So words such as DIS, ED, HIYA, MOZ, OP, PROF, UFO are all allowed. Just remember that forms that are strictly abbreviations and only shown as such in the source dictionary are not allowed. So ETC* (etcetera), CONT* (continued), and EMF* (electro-motive force) are all invalid for that reason.

Any words that can only be spelt with an initial capital letter, or contain a capital letter are all disallowed. This is why $\mathrm{OK}^{*}$ is not allowed (only shown capitalised in the source dictionary as OK ), neither is $\mathrm{PH}^{*}$ (shown in the source dictionary as pH ).

## What Is Scrabble?

Allan Simmons

"The more I practice, the luckier I get" - Gary Player
To the uninitiated, Scrabble is thought of as a game in which luck plays a significant part in determining whether you have good or bad letters on your rack. This is truer when it is a three or four-handed game but the two-player game is quite different. Whilst there is undoubtedly an element of luck in the two-player game, there is also a great deal more skill than the casual observer may realise.

So what are the luck and skill elements of Scrabble?

- LUCK - LETTERS:

The letters drawn from the bag and their compatibility with scoring places on the board.

- SKILL- VOCABULARY:

The knowledge of valid words, the ammunition with which you can arm yourself against the opponent. A player may have a vast word knowledge but little strategic skill to benefit from it. Conversely a player with a smaller but relevant vocabulary coupled with strategic skills is likely to be a better all-round player. Whatever the case may be, it certainly is not a luck factor.

- SKILL- ANAGRAM SKILLS:

Ability to see words/anagrams from jumbled letters.

- SKILL - BOARD AWARENESS:

A ready awareness of the opportunities and threats on a board at any point.

- SKILL- PROBABILITIES:

The ability to assess the likelihood of picking certain tiles from the bag to maintain a balanced rack and/or achieve bonus word plays.

- SKILL - NUMERACY:

The ability to quickly calculate scores for different plays in order to evaluate the best plays (which isn't always the highest scoring play).

- SKILL - STRATEGY:

The ability to make creative plays, take timely risks, think ahead, know when to play many tiles or few tiles, and calculate best endgame plays.

So you can see from the above that there are a significant number of skill areas. If these are applied consistently they will significantly reduce the element of luck of the letter draw. Let's take a look at each of these skill areas briefly, together with some examples. All these areas are also covered in more depth later in the book

- WORD KNOWLEDGE

This book has dedicated a whole chapter to word knowledge because of its fundamental importance to the game. Clearly, the more words that are known from the dictionary of authority, the more solutions a player will have available for good scoring, and resolving problem racks. However, it isn't necessary to read a dictionary from cover to cover because the word knowledge can be selective to fit the most likely situations and needs that arise during the game. This is covered in a separate section but here are a few examples of the power of vocabulary.

If you found yourself starting with the rack ACEIIIN then, with an elementary vocabulary, plays such as ICE, NICE, ACE may occur to you. But these all keep two awkward I's on the rack. Knowledge of the words INIA or ACINI here offers immediate resolution to the problem.

If you find yourself with the low-scoring tiles ADEILOR then words such as RAIL, LOADER, or maybe ORDEAL can be found. But it is only with a more specialist Scrabble vocabulary of sevenletter words that occur with common letters that you might be able to play DARIOLE for a 50pt bonus.

Suppose you have a fairly obvious bonus word on your rack, HEATING, but the board is as below. To the casual player it looks like you'll have to forgo the bonus play.


However, with some specialist knowledge of a few unusual hooks to the existing words on the board there are actually several useful openings.

You may have spotted the possibilities for TEARFUL or FEARFUL (n8) but what about the following?

EXACT takes H before it for HEXACT
OKAY takes $T$ before it for TOKAY
PILE takes I after it for PILEI
HOMELY takes N after it for HOMELYN
Frustratingly, even with knowledge of those unusual words HEATING still won't fit on the board. However, knowledge of useful anagram pairs reveals that HEATING has the anagram GAHNITE which is playable in four different positions, the top score being GAHNITE (a9) for 104pts. That's the difference word knowledge can make to a move and score!

[^5]Even in the most successful game, only 3 or 4 of your moves will be bonus plays. A typical game consists of 12-15 moves per player and thus knowledge of shorter words, particularly those which help to rid your rack of tiles not conducive to bonuses, is just as important as knowing the bonuses themselves.

- ANAGRAM SKILLS

During a game the letters arrive on your rack randomly and it would be very fortunate for them to spell out a useful word on your rack.

One way to prompt words on your rack is to move the tiles around, placing compatible tiles together or forming common prefixes or suffixes, or simply looking for inspiration for an unusual word you might know. For example, with the rack of AABCERT, you'd need to either shuffle the tiles or have the mental dexterity to unravel words such as BRACE, ABATE, CATER, CRATE and so on. It's important to look beyond the first words you find, since an alternative word or an anagram of a word might be a better play and/or score more points.

Given the 50 pt bonus for playing all seven letters, either as a seven-letter word or even an eightletter play using an available letter on the board, this is the area where anagram skills and knowledge are hugely beneficial. During play there is never anyone to tell you when you have a bonus word on your rack or not, so it's worth getting into the habit of always looking for a bonus word no matter how unlikely your letters may be.

Would you have kept looking until you found CABARET from the example above? Experts would also know that CABARET has two anagrams, ABREACT and BEARCAT.

Forming shorter words that might fit together as a compound word can help as well. That way you might have stumbled across BEARCAT before CABARET. Similarly if you had the rack AABMNOT, by forming BOAT you're left with MAN and hence could well spot BOATMAN.

Always assume there is a bonus word to find on your rack no matter how unlikely the letters are, and make yourself look for one. Only then should you look for other plays.

Take these series of racks, for example, which ones would you be prompted to look for a sevenletter word with?

## ADKLMRU AEILORT ADFFHNO ACGIKNO

Only two of them yield seven-letter words but which ones? No answers here. So you'll have to work at those, suffice to say the two words are not too unusual.

## - BOARD AWARENESS

As a game develops, so do access to the various premium squares, openings for bonus words, good scoring spots for the higher-scoring letters. These are both opportunities for one player to use and threats that the other player might score from. Maintaining a constant awareness of these opportunities and threats as the game develops is a skill in itself. Naturally the extent to which a player is aware of the board situation is hindered or boosted according to the number of useful words they know and their knowledge of what letters are still to come from the bag -- although a player can have a very good vocabulary and still not be good at spotting places to play words on the board.

Take a look at this game situation. Have a good look at the board and consider what you might regard as the scoring opportunities.

[^6]

The board is quite open but the biggest scoring opportunities (or threats if you need to be defensive) might not be where you think. The G at (a2) and the A at (d15) are not considered dangerous even though they lie on TWS lines. The $G$ is awkward to use in its position and the $A$ is already covering the DLS which in combination with the TWSs would have been the biggest scoring danger. The possibilities of scoring well with LAZE down to the TWS at (h15) are limited because all the four D's have been played and there is no valid word LAZER*, so an S would be the only letter to benefit from this. Of course, if LAZE later becomes BLAZE or GLAZE then BLAZER or GLAZER become possible. Any plays along line $N$ hooking both AH and ZO are restricted because they would have to contain the sequences AA AL AO AS IA IL IO IS SA SO or SS. Moreover, such plays are less worrying because they would also open access to the bottom TWS line.

On this board the greatest scoring opportunities are:

- The hotspot for an $X$ at (j6) scoring 50pts with one letter
- The TLS/DWS combination accessed by forming (A)PLENTY.
- Access to the TWS at (h1) through forming (A)MOVE or (E)MOVE
- Seven-letter word openings, including the MOPED(S) opening

Board awareness will naturally improve over time through exposure to more and more game positions; pattern recognition develops over time and will help you to spot the most likely places for achieving good scores or strategic cleverness.

## - PROBABILITIES

This skill involves being familiar with the letter set and being aware at any point in the game what letters are still to be played. In all competitive games players keep track of the tiles played on their scorepad in order to know the remaining (unseen) tiles; more on this in the chapter on Tile Tracking. This not only enables better management of a favourable balance of letters on the rack

[^7]but also helps in assessing the risks of certain plays by the opponent. As the game progresses and the number of letters remaining reduces so this skill becomes more significant. During play this knowledge can help players make the strategic decisions about which vowels ought to be played, whether to play more consonants than vowels or vice versa, whether to keep back a good set of letters in the hope of a bonus word, and so on. Ultimately top players will be able to deduce exactly what letters their opponent has on their rack once the bag is empty; see the Endgame chapter for the strategies involved.

## - NUMERACY

It would not be possible to play Scrabble without some basic numeracy skills since there is usually a lot of adding up and multiplying to do each turn. However the more adept you are at speedy arithmetic (through practice or natural ability) the better equipped you are to apply strategy to your game. It's not just a question of totting up the score once you have played your word on the board - it's also about carrying out a quick assessment of the scores achievable for all the reasonable alternative moves you are considering before any tiles are played, and ready-recognition of the letter-values as second nature. Familiarity with the premium squares and letter values is essential for speedy assessments of the best plays.

- GAME STRATEGY

This skill applies to any two-player game. It's the ability to foresee the effect of your move on the game short term and long term. It's the ability to gauge how the opponent might respond to your play and how you then might be able to respond in turn. It's the ability to play set-up plays, and close or open the board for letters that may be still to come from the bag. It's the ability to manage the letter pool; to recognise when vowels are more valuable than consonants and vice versa. It's the ability to think about the effect of the positioning of your word on subsequent play.


Despite the unlikely mix of letters on these racks, they can each make a seven-letter word. You have to find the words, find the only place each can be played, and work out the scores.

[^8]
## Scoring Well

## Allan Simmons

This section looks at how you might improve your scoring other than by making bonus plays. Bonus plays will give you 50 points extra irrespective of the position on the board and generally make good use of the lower scoring one and two-point tiles. Other good scores require an awareness of the scoring opportunities with the premium squares available on the board and involve squeezing the most out of the higher scoring tiles.

- PARALLEL PLAYS

The importance of two-letter words has already been emphasised and can't be underestimated. Without them and the three-letter words, it will be impossible to maximise your scores from parallel plays. By playing words parallel to existing words, not only will you be adding the value of those letters already on the board to your score, but you may also have the opportunity to compound the value of any premium squares covered by your play.

If the first word played is TOWN (h7) and the second player has the rack AADORR?, a standard "living room player" response might be WORD (h8) for 9pts. If ROAD (i8) had been played instead, parallel to TOWN, it would score almost double with 16 pts. The two letter words made are OR, WO and NA.

Note that the double-letter score (DLS) beneath the $W$ counts for the $O$ in WO and in ROAD, in effect making the one-pointer $O$ gain four times its value. A simple example but one which clearly demonstrates the score gains from parallel play.


Taking this position one move further on, assume that the first player now has the rack IINPPUV with the board now as shown below:


By continuing the parallel play thinking, a score of 27 pts can be obtained for PIP (j10) or even better PINUP (j10) for 35pts.

Thinking 'parallel' takes some practice and it's very easy to succumb to more obvious plays through existing letters on the board, but the rewards are great if you can make those shorter words work for you in this way.

## - HOOK OPPORTUNITIES

Once again, if you can make use of the value of existing letters on the board then it follows that you can improve your game score. Words can be played so that they hook onto existing words at the front or back ,thereby scoring the face value of the existing word again. As mentioned in the vocabulary section there are plentiful useful and interesting hooks to learn and most players have their own gems up their sleeves.

But even the more common front and back hooks can be missed if the player is not vigilant as the game unfolds.

Whenever a new word is played on the board it is good to get into the practice of immediately checking what single letter extensions the word may take and then bear these in mind during the rest of the game. If the check is not done when the word is played, more often than not the hook possibility can get overlooked in later play.

Take a look at this board, which at first glance looks a little blocked for good scoring opportunities.


Now look again and make yourself think about what letters might be able to go in front of or at the end of some of those existing words. It's all too easy for the brain to switch off especially if words are vertical or the extension is at the front of the word. This is because we naturally read horizontally from left to right.

Have you spotted the following openings on the above board?

- An A in front of VENUE to make AVENUE
- An O before the unusual VERBID to make OVERBID
- An I before SLANDER to make ISLANDER
- An E after STAMPED to make STAMPEDE (note that STAMPEDO is also allowed)
- There are also the less familiar but still useful front hooks for PLAID and COD to make UPLAID and ECOD respectively.

You will note that in some cases spotting the hooks is vital to being able to have access to good TWS scores on top of the score for the hooked word itself. If you are aware of ISLANDER in the above situation you can score very well from the TWS as well as the 9 points for the hooked word. In other cases the hooked words can provide some score from otherwise weak-scoring letters. For example, dumping the two one-pointers T and O can be achieved with TOW (c7, hooking OVERBID) for 20 points.

## - TWO-LETTER HOT SPOTS

If you have any of the higher scoring tiles on your rack, i.e. those worth 3 or more points ( B C F H K M PWY or J Q X Z) then watch out for vowels next to any of the premium squares. Note that the V has been excluded because there are no two-letter words with the V. The DWS and TWS tend to be less available as they tend to attract more attention for immediate use so it is more likely that there will be DLSs or TLSs available. Again, through knowledge of the two-letter words with these higher-scoring letters it can be possible to notch up 20 to 30 points easily (and much more for the J Q X Z) for using one of those letters with one of your vowels. You may be fortunate enough to have several vowels that go with your consonant and thus be able to play the letters that will leave you with the best balance.

Look at this example position:


Hotspots for good scoring with the higher-scoring consonants are shown in yellow on the board.

[^9]Plays using these could be:

- WO or YE at (b10) for 28 points
- Slotting in a solitary $X$ at (9g) would net 34 points
- Playing UP or OM at (n5) would score 22 points.
- OB or EM at ( n 1 ) would use the DWS both ways and thus gain 19 points.
- OF or EH would score 28 points at (n5).
- MU or Pl at (n10) would score 23 points.
- YU or HI in the same spot would score 29 points.
- Even better, if you could play XI at (n10) it would score 52 points

You may note that some of those spots offer opportunities for three-letter parallel plays as well which not only will gain more points but might also help you dump another awkward letter from your rack.

For example, if your rack is EFIORTT you should choose FIT a(n1) for 36 points and rid of the duplicate T rather than OF ( n 5 ) for 28 points. If your rack is AAEIKOT whilst KAS or KOS looks nice for 35 points at ( n 6 ), your better play would be OKAS at ( n 5 ) for 37 points to help restore some balance to the vowel-heavy rack.

## - PREMIUM COMBINATIONS

The pattern of the premium squares on the board is such that the better scores can be had nearer the edges of the board than in the middle. The outer four rows and columns all provide potential for good scoring plays through a combinations of the DLS and TLS with the DWS and TWS. You will note that in most cases the DLS or TLS has a gap of three squares between it and the DWS or TWS although there are some positions where the gap is just two squares. Four and five letter words largely come into their own here, particularly those that begin or end with a higher-scoring letter. Normally there will be a floating letter that creates the opportunity for such plays so you will find yourself looking to play three of four letters around such a floater with a higher scoring letter on one of the premium squares.


TIP : Use the board to drive your thoughts -- don't just rely on inspiration from the rack alone. Look for the premium square hot spots and combinations that are available, especially if you have a higher scoring letter on your rack. Then see how you can maximise the points by seeing what words you make to fit the spots with the other letters from your rack.

If you don't have a higher scoring letter then it is likely that you will get more points through parallel plays elsewhere on the board since you will gain no real benefit from the letter premium square.

The board layout below, which is a little artificially open, serves to show all of the possible letter and word premium combinations available marked by the lines.

See what good plays you can make in the positions specified with each of the following racks by getting one of the higher-scoring letters on one of the premium letter squares. There are some common word solutions in each case but you may find others.

- ADKNOVW - play from (2j) and (m9)
- GENORVY - play from (15h) and (3i)
- FGHINOY - play from (8a) and (a1)
- EFGINPW - play from (d1) and (18)
- BHLOWRT - play from (b2) and (4k)

Read on for some suggested solutions.


Here are some suggested good plays with the racks given above.

- From (2j) you could play VODKA for 42 points and from (m9) you could play KNOWN for 34 points
- From (15h) you could play EVERY for 45 points and from (3i) you could play YOUNG for 26 points
- From (8a) you could play INCH for 39 points and from (a1) you could play GORY for 36 points
- From (d1) you could play WISP for 26 points and from (18) you could play FEIGN for 26 points
- From (b2) you could play BELOW for 36 points and from (4k) you could play THROW for 30 points

Note that these aren't necessarily the best plays, but with every rack you should look out for such opportunities in order to take them into consideration along with other plays before concluding your move. As you will have discovered once you have read this book, there are many factors to take into consideration for each move.

- REACHING TRIPLE WORDS

TWSs can become available to play onto in several ways. Sometimes the development of words and types of words on the board can make it difficult to spot some TWS opportunities. Take a look at the following board and see how many TWS prospects you can see, then read on.


Different types of play that score TWSs on this board position are demonstrated with some sample racks below as follows:

## - The rack is: E G I I N S W

An existing word could be hooked in order to reach the TWS, e.g. SEWING (a5) making EMOTION. There is actually a bonus play here of the obscure WEISING, if you know it.

An existing word could be played through to use a TWS, e.g. WIDENS (o8) through DEN
An existing word could be played through DEN cover two TWSs (and thus get nine times the word score), e.g. WIDENING (o8) through DEN

A letter of an existing word could provide access to the TWS, e.g. WINGED (8a) onto the D of DOVE

- The rack is: HIOPQUX

An existing word can be hooked to give access to a TWS, e.g. QUIP (1a) turning RESET into PRESET

An existing letter can be played through to use a TWS, e.g. PHLOX (8k) through L of FLATTEN

## - The rack is: AEIMOTY

An existing word could be played parallel to BIKING, e.g. MATY (h1) making BA, IT, KY

An existing word could be extended at the front to reach a TWS, e.g. EMIGRANT (15a) using GRANT on the board

An existing word could be extended at the end to reach a TWS, e.g. TIRESOME (o1) from TIRES on the board

Some of these plays are now shown on the board for clarification:


Extending existing words before or after to reach TWS are the moves that are often unspotted and so can give a player an advantage with a bit of lateral thinking. Watch out for these opportunities especially following first plays of five letters that start at (8d) or (h4).

Whilst some extensions are more obvious than others, being standard prefixes or suffixes, some will completely transform the existing word. Unless you are vigilant throughout, even the more obvious plays can be missed. Would you spot the following extensions during play?

COA-TRACK
GAN-GLAND
OVERT-AKE
TOWNS-HIP

## - DOUBLE DOUBLES

When a play covers two double word scores it is known as a double-double because the score for the play is first doubled, and then doubled again. Sometimes it is referred to as a four-timer. Whilst it can be a great thrill to be able to play a bonus word across two DWS and get a huge score, there are also good scores to be had through non-bonus double-double plays. It tends to be the innermost DWS that create the easiest opportunities for such scores because they are closer together. You may be able to play just six of your tiles through an existing letter between two

[^10]DWSs, or less commonly, five tiles around a two-letter word between two DWSs, or extremely rarely as few as two-letters around a five-letter word sitting between two DWS.

Scores of 30 or more points can be obtained through using just one or two-point tiles from even the most unlikely racks, especially if playing around a two or three-letter word. Take the following uninspiring racks for example:

- ABGINTV
- AFGIIOR
- ACGLRVY
- DINOTUU

On the following board they can all make plays scoring 44 or more. Read on for the solutions.


ABGINTV: With this rack the ING is the inspiration for BATHING around the H of CHANT. That's scores $4 \times 13=52$ points.

AFGIIOR: With this rack it is the ED in column 5 that enables a great double-double play of FIREDOG for $4 \times 12=48$ points.

ACGLRVY: With this rack the unlikely-looking BID in row K provides the solution this time by enabling the play RABIDLY for $4 \times 13=52$ points.

DINOTUU: The awful low-scoring collection on this rack can liven up the game with NUTWOOD through the less obvious possibilities down column 11. That scores $4 \times 11=44$ points. Not bad for dumping DNUO! Even better, if you know it, is OUTWOUND in the same spot.

Of course in actual games the opportunities aren't as abundant as they are in that example, but there will often be one or two possibilities arising through natural play, especially when a play such as PADRE enables a TWS parallel play such as WROTE as in the example board.

## - THE ULTIMATE: TRIPLE-TRIPLES

Very often in a game, a word is played such that it leaves a letter between two TWSs. Normally one or other of the TWSs is then used for a TWS play. Sometimes, although very rarely, a player might be able to play all seven letters around the letter on the board so that the eight-letter word formed covers both TWSs. This is termed a triple-triple and amasses nine times the word score, which is why some players refer to them as 'nine-timers'.

Don't expect to get too many triple-triples since it's rare for a useful letter to be left open between two TWSs for more than a turn. It is more likely to be good fortune that will give you the right rack at the right time to pounce on an opening made by the opponent. Word knowledge will undoubtedly increase your prospects though.

Here are some examples.


## The rack is: AGINPRT

You have the unplayable PARTING (the more unusual TRAPING and PRATING are also unplayable) but the floating M (a4) allows TRAMPING to be played for a triple-triple worth a whopping 167pts ( $13 \times 9$ plus 50 bonus).

## The rack is: EGINPST

Unfortunately PESTING is not a word but you may delighted to spot a great double-double play around the O (k6), PONGIEST (94). It's all to easy to be thrilled with such a play and look no further but it's worth checking out a triple-triple position if it's available just in case. In this instance you were about to miss PIGMENTS (167)!

## The rack is: ADGENRS

It's not too difficult to spot a seven-letter word here - There are three (GARDENS, DANGERS, GANDERS). Only DANGERS can be played on the board at ( $\mathrm{m} 8,75 \mathrm{pts}$ ). This time there is no triple-triple word around that $M$ but there are other possibilities to explore before playing DANGERS. It's not uncommon for there to be two-letters available between two TWSs when one player tries to restrict an opening by playing parallel to the opening word (e.g. WAIT next to ENDEARS in the example). In this case the two letters are WE. It's always worth keeping an eye open for possible triple-triple plays around such letter groups. You only need to play six letters to get a huge score, which increases the possibilities of such a play. With the GARDENS letters there are actually two possible triple-triple non-bonus plays: ANSWERED (108) and RAGWEEDS (117).

Treat triple-triples as an occasional by-product of the game and don't get fixated on trying to get one, nor indeed overly worry about the opponent getting one if your best play is to leave a tripletriple opening.

WARNING : If you find yourself with a triple-triple opportunity but your rack is just one letter wrong for a fantastic score do not fall into the trap of 'fishing' for the right letter by playing off the odd letter somewhere else. Unless the letter you require has a greater than $50 \%$ chance of being picked you are very unlikely to get it, and anyway, the spot is likely to be taken by the opponent.

## EXERCISES



The rack is: A F I L M T U
With this rack see how many TWS plays you can make by extending existing words on the above board layout. Start afresh for each play with the same rack and the same board position (above).

Again, with the same rack and board position see if you can find the two double-double plays through existing letters on the board. You don't need to use all seven letters but the plays must cover two DWSs.


The rack is: AFIKQUW
There are several high-scoring hotspots on this board. As an exercise, see how many points you can accumulate from the rack in four moves. Once you've played one word, leave it on the board and find a further play with the remaining letters on your rack and so on until you've used all seven letters.

## Understanding Rack Leaves

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 highprobability bonus plays using mainly the 1 pt and 2 pt 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 highprobability 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 4 s and 5 s for getting rid of the non-bonus tiles alongside the high-probability 7 s and 8 s 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 l'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 $\mathrm{CC}, \mathrm{HH}$ 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 vowelheavy 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 annihilate 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 on page 36 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:


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 2 pts in score 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.

## 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 CSW12 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 116,000 different words. Here's how they are broken down:

| Length | Words | Percentage |
| :--- | :--- | :--- |
| 2 | 124 | $0.11 \%$ |
| 3 | 1,310 | $1.13 \%$ |
| 4 | 5,526 | $4.77 \%$ |
| 5 | 12,646 | $10.91 \%$ |
| 6 | 22,410 | $19.33 \%$ |
| 7 | 33,274 | $28.71 \%$ |
| 8 | 40,622 | $35.04 \%$ |
| Total | $\mathbf{1 1 5 , 9 1 2}$ | $\mathbf{1 0 0 . 0 0 \%}$ |

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 |  | $O X$ |  | 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 2 s and 3 s 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:


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 table of all such words up to eight letters:

| BUQSHAS | QABALAHs | QASIDAS | QINDARs | QWERTIES | TZADDIQs |
| :---: | :---: | :---: | :---: | :---: | :---: |
| BURQAS | QABALISMS | QATS | QINDARKA | SHEQALIM | TZADDIQIM |
| FAQIRS | QABALISTs | QAWWALS | QINTARKA | SHEQELS | UMIAQS |
| FIQHs | QADIs | QAWWALIs | QINTARs | SUQS | WAQFs |
| INQILABS | QAIDs | QIs | QIVIUTS | TALAQs | YAQONAS |
| MBAQANGAs | QAIMAQAMs | QIBLAs | QOPHs | TRANQS |  |
| NIQABS | QALAMDANs | QIGONGS | QORMAs | TSADDIQs |  |
| QABALAs | QANATS | QINs | QWERTYS | 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?


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 have them pretty much fixed, 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 taster 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
9 AEEINRT = ARENITE, RETINAE, TRAINEE
10 AEGINOR = ORIGANE
```


## Eights

```
1 ADEINORT = AROINTED, 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, 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 $1000 \ldots$ 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 in order 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, mainly by grouping them into sets with common characteristics:

- 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 pretty 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 here 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

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 $\mathrm{J}, \mathrm{Q}, \mathrm{X}$ 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 143 fours including the letter J are as follows:

| AJAR | JACK | JARK | JAZZ | JERK | JIMP | JOEY | JOSS | JUGS | KOJI |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| AJEE | JADE | JARL | JEAN | JESS | JINK | JOGS | JOTA | JUJU | MOJO |
| BAJU | JAFA | JARP | JEAT | JEST | JINN | JOHN | JOTS | JUKE | PUJA |
| BENU | JAGA | JARS | JEDI | JETE | JINS | JOIN | JOUK | JUKU | RAJA |
| DJIN | JAGG | JASP | JEED | JETS | JINX | JOKE | JOUR | JUMP | ROJI |
| DOJO | JAGS | JASS | JEEL | JEUX | JIRD | JOKY | JOWL | JUNK | SIJO |
| FUJI | JAIL | JASY | JEEP | JEWS | JISM | JOLE | JOWS | JUPE | SJOE |
| GAJO | JAKE | JATO | JEER | JIAO | JIVE | JOLL | JOYS | JURA | SOJA |
| GJUS | JAKS | JAUK | JEES | JIBB | JIVY | JOLS | JUBA | JURE |  |
| GOJI | JAMB | JAUP | JEEZ | JIBE | JIZZ | JOLT | JUBE | JURY |  |
| HADJ | JAMS | JAVA | JEFE | JIBS | JOBE | JOMO | JUCO | JUST |  |
| HAJI | JANE | JAWS | JEFF | JIFF | JOBS | JONG | JUDO | JUTE |  |
| HAJJ | JANN | JAXY | JEHU | JIGS | JOCK | JOOK | JUDS | JUTS |  |
| JABP | JAPE | JAYS | JELL | JILL | JOCO | JORS | JUDY | JUVE |  |

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 Shook to JOE, making SJOE, and the surprising J terminal hook to BEN, making BENJ. Similar considerations apply to the $\mathrm{Q}, \mathrm{X}$ 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 five and a half thousand 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 be able 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):


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 lowish-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 (your 'equity loss') 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 the high-prob ones 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 | QANAT |
| QADI | AUDIO |
| QAID | ZOEAE |
| QATS | AIOLI |
| JIAO | AINEE |
| AWEE | FAQIR |
| AVOW | NIQAB |
| AJEE | OUIJA |
| HIOI | QORMA |
| AQUA | TALAQ |
| IXIA | YITIE |
| QUAI | BOOAI |
| EVOE | AQUAE |
| WEXE | OORIE |
| AGIO | QADIS |
| EXON | ADIEU |
| OHIA | AIDOI |
| OGEE | ZOAEA |
| ODEA | OIDIA |

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 make up 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 US 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 TAUIWI, 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.


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).

## The First Move

Brett Smitheram
Few moves in the game of Scrabble have so frequently found themselves both under- and overanalysed 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) are summarised as: Vowel placement, Orientation, Risk of providing floaters, Potential triple-word extensions, and the "Nearly" Rack.

## Vowel Placement



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 the ( g ) and (i) rows. 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 8letter 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 our opponent will have to leave us.

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: C E E K L R R

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 $15-20$ pts 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...


## 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: E E E F R R Z

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 ZAXIZEX 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. Not however that it is inadvisable 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

## 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.

This is the point at which many novice players promptly give up. Successful tile tracking involves training yourself to perform a routine on every move of every game, something that you will not do perfectly after only a few games. However, much like learning to drive a car with a manual gearbox or riding a bicycle, you will soon go from feeling that you are 'all over the place' to completing the whole routine quickly and automatically - as long as you are prepared to practice.

## How Do I Do lt?

Printed sheets showing the 100 tiles are permitted at all levels of play and you will rarely see a player without one; this is a luxury not afforded to tournament players some years ago when the rules stipulated you had to write out the tracking list in your own time once the game had begun! How the letters are presented is a matter of personal preference. Some players group consonants/vowels/power tiles for quick reference when it comes to the balance in the bag, others stick with alphabetical order. Some cross off letters e.g. NNNNNN, while some simply record a tally. Having tried most versions, I would generally advise against the tally method unless your handwriting is very clear under pressure! Some preprinted scorebooks also contain a small empty board diagram, or else you can find a variety of scoresheet designs online to download and print many copies. Rumour has it that office photocopiers have been used for such purposes but I couldn't possibly comment.


Tournament rules state that you must write down the scores of every move played by both players. The instructions for tile tracking are essentially simple: work out which tiles your opponent has played and cross them off the grid. Be sure to only cross off the new tiles placed on the board and not every letter in the word played. For example, in the picture above MARVEL has been played making use of the MA and V tiles already on the board and hence the only letters to cross off your grid are $\mathrm{R}, \mathrm{E}$ and L .

Each move played usually requires the following actions: writing down the word(s), writing the move score and cumulative score, drawing fresh tiles from the bag if necessary and then tracking the tiles played on the last turn.

When there are only a few tiles left in the bag (typically less than 7), it is time to use the blank space on your scoresheet to write out which letters are unseen. You may choose to circle or cross off the letters on your own rack before doing this in order to avoid accidentally writing them down.

## What do I do when it goes wrong?

If you realise your mistake at the time then it is usually easily fixed; for example, if you cross off a letter accidentally then simply reinstate it at the end of the row of printed letters. However, most mistakes in tile tracking are not noticed until the end of the game when the number of tiles in the bag is not what you were expecting or when the opponent plays a letter which, according to your sheet, they are not supposed to have.

When you find the wrong number of tiles in the bag, the error is nearly always a failure to tile track one or more plays. Most players find this will occasionally happen after a challenge has unexpectedly interrupted their routine and they have not gone back to their scoresheet to finish the job. The smartest tactic is to ensure that this mistake is easily corrected by recording the moves played on an empty board grid as you go along. Make sure that you never separate the actions of writing the word on the board and tracking the tiles on the grid. Since the board on your sheet should always be an exact replica of the real board in front of you, when you do find that your tracking grid shows too many letters still remaining, it is very easy to compare the two boards and see which moves you have not tracked.

If you write the move on your copy of the board before you tile track it will reduce the chances of crossing off the wrong letters on the grid. You will also be able to study your copy of the board without showing your opponent which part of the board you are looking at and without having to read it upside-down while it is the opponent's turn. The benefits of being able to see immediately where your tracking has gone wrong and of having a duplicate board for your own reference at any time easily outweigh the extra 2 or 3 seconds it will take to write a word on the board once you have made it part of your routine.


Example scorebook page (from Tilefish) with tile tracking grid, empty board diagram and space to record the player's racks or rack leaves.

## 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 NNTTTTT 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 $\mathbf{Z}$ 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

- Practise, practise, practise!
- 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 <br> 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

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 recognizing 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 nor 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 a fifty point bonus for the bonuses, 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 at a fast time control, the better you will get at visualizing the possibilities and finding the plays quickly. 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 minimizes the amount of your time that the opponent has to think on.
- Develop an awareness of when the board is getting very 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 even very 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, have tiles that look like you might be able to 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 bonus 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.



## 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 highrated 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.


Our rack: AEIIIOR
The best of the available scoring moves are probably $\operatorname{AI}(R) I E R$ (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 vowelly
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 does depend on factors such as board position/remaining pool to some extent.

## A typical consonant-heavy rack



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
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 FFVW 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



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: JQUVWXZ

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/Ql 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 4/ Keep QUZ

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 5/ Keep XZ

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?



Our rack: EQRSTVZ

The best play that scores anything is VERST (i5) for 19, but the excellent leaves possible from a change make doing this 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 does know all the words, including all the high-probability bonuses containing ERST. But if you are not yet solid on the high-probability bonuses you may be better off keeping the Z as well to score with. 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 in this case.

## A valuable hook



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 WHAP (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. But it will have an effect. 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. Indeed, you may be faced with a dilemma about whether to sacrifice points blocking the spot yourself on your next move. 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.

## Set-Ups

Allan Simmons
A set-up play is one where a by-product of a move creates a great scoring place for a letter retained on the rack for the subsequent move. It follows that prime scoring letters for setting up are the $\mathrm{J} Q \mathrm{X}$ and Z but set-up opportunities can also arise if you have the last of any letter where you may be able to create a unique hook position for that letter. More commonly having the last S suggests a set-up play could be profitable especially if you need a bonus, or a good score on a TWS for example.

It is not worth considering a set-up play though if you estimate that you can score more over the next two moves without the risk of a set-up. It follows therefore that the best set-ups are those where you can also score reasonably well with the letters you have as well as creating a possibility of a high-score the next turn. Considerations such as the likelihood of the opponent blocking the set-up and the alternative moves if it is blocked should both be factors in your decision.

Of the high-scoring J Q X Z generally the X and the Z lend themselves more to set-ups than the J and $Q$. This is because there are normally more alternatives for the $X$ and $Z$ should the set-up fail whereas a bad pickup with the $J$ and $Q$ and a blocked setup can be a disaster. So you should consider a set-up play for J Q X or Z when:

- There is no current play to triple or quadruple it this turn and the set-up play scores close to any other move with the high-scorer anyway.
- There is a realistic prospect of the set-up achieving a greater score over this move and the next.
- The set-up play is not too suspicious, i.e. your play does not look as if its only purpose is to set up for a high-scorer.


Our rack: DELMOOX

The scores with the X include AX, AXE, AXLE , AXLED, AXEL, AXED at (10f) for 25-29 and DEX $(9 \mathrm{~g})$ for 33 , LOXED (c3) also 35. If you look at what you can score without the $X$ then you may spot MOLD (i5) for 28. This play scores just 7 points less but retains plays of AX or OX at the newly created hotspot at ( j 5 ) for 54 . Note that if that spot is taken or inhibited (quite likely) than an I from the bag will enable XI (f10) for 53.

Sometimes the set-up may not be as certain as that example, and may depend solely on picking the right vowel from the bag. If the vowel you need is one of A E I or O and there are not many on the board, and your set-up move is using five or six letters then there is a reasonable chance you may get what you need.

Another example with the same board position above. The rack is DFGLOOZ
Scores with the Z include AZO (10f, 32pts) , ZOO or DZO (a13, 28pts), DZO (i8, 32pts), and DZO ( $9 \mathrm{~h}, 30 \mathrm{pts}$ ). Holding the $Z$ back, there is a reasonable score for FLOOD (c3, 27pts). Note that the ZG on the rack could then combine with an A pickup to give ZAG (b6) for a whopping 68pts. If the opponent plays parallel to FLOOD then the TWSs on the left hand side of the board may well become available for a $Z$ play.

As mentioned earlier, apart from the high-scorers, having the last of any letter, especially the last $S$ can set the scene for a nifty set-up. It's not too difficult to find words to play that only take an -S hook and if you can manage to dangle one up to a TWS row or column, or even up to the TWS itself, a bumper score could be unblockable. Such set-ups can afford to be low-scoring because there's no attempt to hide the fact. If the opponent feels obliged to waste letters and score little for trying to make the opening difficult then that too is a victory for the set-up. More often the opportunities for a unique -S set-up will come late in the game but here's an example from a tournament game after about one third of play.


The letters look good and there's bonus potential. Normally with this sort of rack you might look for a good score with the P and two or three other letters keeping the S back and maybe the E . The best scores on offer demand use of the S, viz. - SEPIA (2b, 31pts), PUNS (14b, 28pts). Without using the S plays include PUN (14b, 18pts), PINA (2c, 21pts) or the favourable PUN (h1, 18pts).

However, if you recognised that you have the last $S$ and more creative move is to just play PUR (6b) for just 11 pts. Given the early stage of the game, if the opponent leaves it alone it could be available for several subsequent turns and given your promising keep of AEINS there could even be a TWS bonus coming your way.

As mentioned, it doesn't have to be the last S , here's an example tournament game where the last E's were all on one rack, giving a set-up chance for a front E-hook to provide a late game score initiative.


Our rack: BEEVRW?
There are ten E's on the board so the last E's are on this rack along with the second blank. The player was in front by 15 points and was looking for a play to counter a possible TWS score by the opponent from O1 using the unseen last S for UTUS. The solution was to play VET at B6d knowing that it takes an E as a front hook (EVET) creating free use of the top TWS line. Any attempt to block through the V will only serve to open up the top TWS further.

## Open and Closed Boards

## Edward Okulicz

Understanding and taking advantage of the geography of a board populated with tiles is 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 with the same strategy as the last. 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. Always be aware of the fact that while your rack is your own, the board is a shared resource that you can seldom control completely. Skilful management of open and closed board situations is about 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.

The good news is that improving board management can be done 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.


This is an example of a board which has many lanes open in which bonuses could be played, the

[^11]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. If you've got a lead of 50 points, you will be unable to shut down the board and protect this lead with a series of blocking plays - blocking most of these alleys will result in low scores and waste turns. The right tactic here will depend on your rack and the exact score.

## Closed boards

Closed boards are ones in which there are few scoring opportunities. But do 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. Be aware of the possibility of set-ups 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 do take notice of the possibility of playing a small word which makes a double-sided opening, both sides of which cannot be blocked:


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. 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 for every turn and your main focuses should be score and rack leave, not attempting to limit scoring spots or intentionally create 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 AT, ES, IN or RE). Cultivating a closed board is quite difficult to do and yields limited rewards.

## Open up when behind, block when ahead

Like many good rules, there's a lot of truth here, but knowing when to apply the rule is the key component. It is important that you not 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 the players are averaging about 40 points per turn. Some of these plays are bonus plays, but good players are scoring well 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 that. 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 pt 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 should 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 little blocker for 10pts when you have 30 available somewhere else.

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

Sometimes this rule will conflict with the former. 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 highscoring 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 rashly. 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, for instance. The risk here is less, and the reward potentially high.

The previous two rules have to be considered in combination with each other. 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, it 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 be able to create better openings. 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-ornothing 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 up, the play should be difficult to thwart, ideally opening two spots, or a new spot distant enough from an existing one to make blocking both impossible.

Here's an example of a decisive opening from a promising rack:


Our rack: AIINUT?
Unseen: AAEEENRTUU

[^12]The board only contains one obvious bonus line, from (15h) onto the D. The UN- prefix would go well with the D, especially with one of the three unseen E tiles to make an UN----ED word, but in order to capitalise, it is important that another spot is created. The play of $\mathrm{Al}(12 \mathrm{~h})$ creates the word ETA which can be hooked by a T (ETAT) or the blank (ETAs), both of which are retained on the rack. Blocking both alleys would require a vertical play downwards from the newly-played I, and would expose more floaters or an S-hook. The actual draw of AE allowed sevens like AUNTIEs and AUdIENT, and eights like sINUATED and UNbAITED, the last of which was played to win the game, but even drawing a bonus that plays in just one of the two spots gives you a good chance of winning as the opponent may guess incorrectly.

## 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.


In this position there are feasible bonus lines through the first three letters of FULMARS or using the B-EAU hook at (a13), however the main area of concern is the possibility of a vertical bonus play through the E on the centre square. In this real life situation from the Isle of Wight tournament in 2006, the play chosen was PENNED (h4), which scores little but closes off the E, U and L
floaters. An alternative would be to hold onto the D and just play PENNE for the promise of a highscoring play at (o12) hooking HOED (there are 3 unseen Os for ONO). While these moves don't block all the floaters, they block the most likely ones and retain scoring possibilities either through the rack leave, or forcing the opponent to take a difficult or undesirable line (a play on row 2 will open a TWS, for instance, and the A column is very hard to use).

## 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 also 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 all very well and good, but you might be playing off the very tiles that will form the foundation of many bonuses. You may also be scoring so few points that your opener plus your bonus will score barely more than two average moves, and in this case, you're making a risk for minimal reward. Scrabble strategy is holistic; even when considering board management, you 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 "Always block a triple-word score if your opponent opened one". It's bad advice, and if that's your tactic, an opponent will readily distract you from their set-up or bonus spot by letting you have a cheap 15-30 point on a TWS. Remember that the average score of a top-level player in the middle of the 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 on a spot you have no interest in because a bonus won't fit there is exactly what you want to happen. Don't let one particular spot on the board take the focus off 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 of these, or if others are not available, to create one:


## Our Rack: AAEORUX

An excessively defensive player will see the A of ALEURON as a major threat which must be blocked at all costs. The best blocking plays available are AURA (a8) or AREA (a8), both scoring 12 pts , which are extremely poor choices when considering what else is on offer. The best move is ROUX (112) for 42pts. Any danger from placing the $X$ in this column is offset by the fact that your opponent cannot use both sides of the board at once and you will be left with whichever side they do not use. Analysis reveals that none of the top 18 plays in this position involve blocking the left hand column.

## 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 right one, 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.

# 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 6 pts), leaving you 24 pts 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 BCIILRS with the bag empty. How can Lewis win this match?


Austin cannot go out in one from BCIILRS, 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, 23pts). This leaves OOT with 17 points available to play either OOT (n5) or TOO (2d). 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.


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.


There is no mathematical way that Nigel can win, that is unless his opponent errs on his next move. Nigel puts the pressure on David to find the best move. Nigel plays FIR (12I) 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 (14I, 27pts) is the only move that does the job. 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. And 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?


The answer is EM ( $\mathrm{m} 13,4 \mathrm{pts}$ ). This sets up an unblockable ZONA/EMO (15I) 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?


MEU (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. The best sequence for Christian is GIG (9c) for 12 points, TUG (c7) for 5 points, HER (f2) for 6 points then HERE (f2) for 9 points to reach a score of 411. Taking the I, the final score would have been 412-407.

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 check 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:


Nigel holds AILORRT and an 117 point lead. 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 play out before he does, even though he's going 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

## 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 one 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:


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) or 40 points, or possibly colonisation of the (10e) hotspot with WO. One of the drawbacks of KEWL is the poorish 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:


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 43 pts , 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:


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:

| 15 A | SLIMSIER | 86 |
| :--- | :--- | :--- |
| I8 | SELFISM | 83 |
| 14 G | BESMILES | 80 |
| 15 H | REALISMS | 80 |
| 15 H | REMISSLY | 80 |
| 15 H | 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:


Rack: DDEEINT
The bonuses available are:

| 13 H | INEDITED | 72 |
| :--- | :--- | :--- |
| 12 C | DENTILED | 70 |
| $13 D$ | 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 96 pts. 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:


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 Naween 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:


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:


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:


One way to score some points is with the single-tile dump, ZA ( $\mathrm{j} 14,31 \mathrm{pts}$ ). 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 betterendowed 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 is also good on 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 to 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 visualizing 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.

## How To Play AMAZING 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 50 pt "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 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 move 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 wallopings 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 - 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 - 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 whereby 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!"


## 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

## 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 it 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. Betcha went through all the $2 \mathrm{~s}, 3 \mathrm{~s}$, the high-point 4 s and 5 s , and the first few hundred 7 s and 8 s 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 $15-\mathrm{by}$ - 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 rack-by-rack analysis. The anxiety about each analysis. The formulation of alternate analyses. 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. Face it, there's just so many activities going on every turn.

The important task to do 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 the king (or queen) 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 already.

## Starting Out in Competitive Play

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

You do not need to belong to any club or association in order to play in a Scrabble tournament. In many cases, information on your country's national association will be available at the event. Simply find details of the event on the appropriate website and follow the instructions for paying the entry fee, the organiser will then advise you on anything 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 of the experienced players coming to a tournament 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 computer 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 judge roughly how many tiles are left in it. If you wish to feel inside the bag to count the remaining tiles more precisely 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 the majority of tournaments the adjudication is done by use of 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 or cross - the whole move is simply deemed either "valid" or "invalid", regardless of how many words have been challenged.

## What's this about 'ratings'?

You will notice that most other people in your division have a rating listed next to their name, whereas you will find you don'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 for this purpose.

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!

## Quackle

Toh Weibin
Quackle (http://www.quackle.org) is a wordgame artificial intelligence programme nowadays used by most expert Scrabble players to evaluate their games in one way or another. 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 when it comes to the crunch.

## 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 CSW12 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 in most cases. 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 preendgame. 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 (9f) 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 H 2 , forming $D(A L)$. 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 $2 L D A B$. 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.

## Zyzzyva

Chris Lipe
"Only those who dare to fail greatly can ever achieve greatly" - Robert Kennedy
Zyzzyva (www.zyzzyva.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 Zyzzyva. A comprehensive guide to everything the program can do is available in a separate download from 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 Zyzzyva" tuition video by Canadian player Curran Eggertson available at http://www.youtube.com/watch?v=omqmVcb-II4

Zyzzyva also has a mailing list and a Facebook page which are good places to ask questions.

## How to Use Zyzzyva

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 Zyzzyva toolbar will bring up a Search window.
There are a few powerful options built into the search function of Zyzzyva 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: $\left[^{\wedge} A E I O U\right][\wedge A E I O U]$ 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 Zyzzyva 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 CSW12 lexicon, then choosing "Not" and In Lexicon: CSW07 you will get a listing of the words added newly to CSW12.

- 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 Zyzzyva 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 ANDed 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:
2. Anagrams - This will ask you to enter the words found in a jumble of letters
3. 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:

4. 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 + ?.
5. 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.
6. Quiz Method: This section will cover the Standard method. See the next section for an overview of the Cardbox method.
7. 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.
8. Restore Progress: When loading a saved quiz, do you want to restart where
[^13]- 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.

Zyzzyva'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 Zyzzyva 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 Zyzzyva 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 Zyzzyva 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 Zyzzyva.

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: AEEIORT}\mathrm{ Get Info
AEEIORT
Overall Record: 1/1 (100.0%)
Streak: 1 correct
Last Correct: 2012-06-19 21:13:11 (today)
Cardbox: 1
Next Scheduled: 2012-06-24 21:55:50 (5 days)
```

"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 Zyzzyva. Comprehensive instructions on every feature the program has to offer, including details on how to synchronize the desktop Zyzzyva with the iPhone app in order to maintain a single cardbox, can be found in the Help files of the program itself.

## Internet Scrabble Club

www.isc.ro
The Internet Scrabble Club is an online Scrabble server launched in March 2001. The site is accessed by downloading software named Wordbiz from the ISC website and entering a username and password.

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 noncompetitive players and the range of ability goes down to beginner level so you are guaranteed to find your own level somewhere and plenty of opponents. The simple but functional rating system helps and as in real life it can be fun to keep track of your progress.

Wordbiz software suffers from rather clunky and unintuitive controls, although the Help files found 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, none of which have yet managed to be updated to use the Collins 2012 lexicon).

Unfortunately the site suffers from numerous other bugs and problems, perhaps most notably:

- menus are poorly laid out and the text-based commands can be unintuitive
- poor online support; very few of the Helper team are club or tournament players
- players can abort games without penalty after their opponent's first move
- the adjudication system for determining the winner after one player has quit is flawed
- log-in passwords can never be changed
- inability to produce list of racks/moves after a game or export finished games to outside the server (for example .gcg files as used by Quackle).

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 phoneys 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 Zyzzyva 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 practice 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 this book's authors and the editor can be found on ISC under the following usernames:

| aphis | Andrew Fisher |
| :--- | :--- |
| dewk | Dave Koenig |
| evzone | Evan Berofsky |
| Malomar | Kevin McMahon |
| mitsurugi | Paul Gallen |
| taqi | Edward Okulicz |
| Tokoloshe | Stewart Holden |
| twq | Toh Weibin |
| Winchelsea | Ed Martin |

If you see us online then don't be afraid to introduce yourself and say hello!

## 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.

## Today's 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 3045 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.

## No matter

how slow
you go,
you are still
lapping
everybody
on the couch.

## 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.

## JumbleTime <br> www.jumbletime.com

It is worth mentioning that a predecessor to Aerolith exists in the form of JumbleTime. Although offering fewer features, the game itself is almost identical and the site also offers daily challenges in both TWL and CSW12 lexicons. For the latter, use the ABSP satellite log-in to make CSW12 the default dictionary.

## Scrabble by Phone

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.


## Zarf

Zarf is a quick, easy to use and free word-finding app which features CSW12 lexicon amongst its default options. With the standard Pattern, Anagram and Build options it is a vital handheld resource, a must-have for all competitive players. Also includes a built-in timer to turn your iPhone into a 'chess clock', useful for Scrabble on the move!


[^14]The Holy Grail of word study software also has an iPhone app which is currently under development. Featuring basic search options and a rudimentary quiz function which has new features added on a regular basis, there is also an option to synchronise your desktop computer's Cardbox contents with your iPhone, enabling you to study your regular Cardbox on the bus/train/toilet... anywhere that suits!

## Adnoto



A highly recommended score-keeping app which records racks, moves and points and output the data in useful formats, including the.$g c g$ 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 CSW12 dictionary. An Android version of Zyzzyva is at early development stage, join the Zyzzyva forum for regular progress updates.

## Books

These are the books you should strive to own if you are a competitive player using CSW12. 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 Words (2012 edition)
ISBN-13: 978-0007459117
Commonly known as CSW12, this it the word authority of all competitive play outside North America. An immediate non-negotiable essential purchase for anyone reading this book. Note the WESPA logo on the front cover to indicate that this is the correct reference for competitive players.


## Collins Scrabble Dictionary (2012 edition)

ISBN-13: 978-0007436064
As above but with definitions. 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 (2012 edition)

ISBN-13: 978-0007425631


The useful companion to CSW12, this contains word study lists starting with 2s, 3s and 4 s and moving to high-playability shorter words, essential bonus stems (e.g. AEINRT+1) and a complete list of all 7 s and 8 s 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.

## Letterati <br> 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 organized 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.


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.

The Times Scrabble Workout<br>Allan Simmons

Using positions taken from Allan Simmons' weekly column in The Times newspaper, over 90 puzzles feature real-life game-play challenges for the reader to solve and come with accompanying help and advice on a particular Scrabble problem.


## Playing To Win

David Sirlin
Available to purchase in printed form but also to read for free online at 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!


[^15]
## Scrabble Variants

## Brett Smitheram

Over the years Scrabble players have devised other ways of enjoying wordplay which are variations upon the traditional game we all know and love, some using the board, some just the letters, but all based upon the same lexicon. The three most popular of these are: Clabbers, If Only and Anagrams (also known as Snap Jarnac). A variant named Duplicate Scrabble also exists and is the standard method of tournament play in French-speaking countries.

## Clabbers

This is essentially Scrabble with anagrams. Played on a normal board, with a normal set of tiles, the difference is that as long as the letters you play make a word when rearranged then you can place them in any order you wish e.g. ALPRONEE, making PERONEAL, could subsequently be hooked by adding an A to it...ALPRONEEA making AEROPLANE. This means that not only are you able to maximise your score from a play by being able to position the highest scoring tiles on the best premium squares, but it becomes much easier to play bonus words (using all 7 tiles) because there is almost no such thing as a "blocking" play. It is not uncommon in Clabbers to find boards developing into large squares of tiles, with each move creating multiple overlaps and
 intricate interweaving plays.

This open-sounding game does come with certain tactical considerations however. For example, because the potential for scoring becomes significantly higher once there are already tiles on the board, it is a disadvantage to go first....so the player winning the draw to start actually earns the right to go second. As triple-triple plays also become much easier as you don't have to worry about where the floating tile is, players also tend to try to avoid the outskirts of the board with low-point tiles, preferring to hang a $Q$ out, as although it may give 40 points away, that is significantly less than a 100+ nine-timer!

As Clabbers is so focused on the players' anagram abilities, it is usually played to doublechallenge i.e. a failed challenge resulting in the challenger forfeiting their next move. Once a word is challenged, the person playing it must declare the word and it is checked as normal....quite embarrassing when it turns out to be an everyday word!

Top players should usually be averaging 50+ per move in a game of Clabbers, with individual scores of $700+$ not being too uncommon.

## If Only

Named after one of the most common exclamations when looking at an almost-rack. "If only this tile was one of those...." In If Only, it can be!

If Only allows you to play an otherwise normal game of Scrabble, but with the ability to pretend that one of your tiles is another for the purposes of playing a move that scores $50+$ points. To do this, you simply play the word as normal, but turn the replaced tile upside down, declaring it in a similar way to a blank (and similarly to a blank, it scores 0 points.) From this point on, whenever either player finds themselves with the tile it represents on their rack, they can opt to swap it for the facedown tile. Sometimes this can produce pleasant surprises (a much-needed vowel in a rack of
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 7 s and 8 s , 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 again often 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.

## 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 tournament player in order to join your national Scrabble association, just simply find the membership details on the appropriate website. Most associations produce periodical 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:
Word Buff - includes a Word of The Day taken from CSW12, provided with definitions
ScrabCast - live video broadcast of games from major Scrabble events
Dweebovision - videos of ISC games by UK Grandmaster David Webb with tuitional commentary.

| Country | Association | Facebook | Mailing List <br> (click link to subscribe) |
| :---: | :---: | :---: | :---: |
| Australia | Australian Scrabble Players Association | Scrabble NSW Scrabble Victoria | oz-scrabble |
| Canada | North American Scrabble Players Association | NASPA | naspa-pro |
| India | Indian Scrabble Association |  | indian-scrabble |
| Ireland | Republic of Ireland Scrabble Players Association | Irish Scrabble | irishscrabble |
| Israel | Tel Aviv Scrabble Club |  |  |
| Kenya |  |  | ScrabAf kenyascrabble |
| Malaysia | Malaysian Scrabble Association | Malaysian Scrabble |  |

The Scrabble Player's Handbook is available for free download at www.scrabbleplayershandbook.com

| Country | Association | Facebook | Mailing List <br> (click link to subscribe) |
| :---: | :---: | :---: | :---: |
| Malta | Malta Scrabble |  |  |
| New Zealand | New Zealand Association of Scrabble Players |  |  |
| Nigeria | Nigerian Scrabble Federation |  | ScrabAf scanplayers |
| Pakistan | Pakistan Scrabble Association |  |  |
| Singapore | Scrabble Association |  |  |
| South Africa | Scrabble South Africa |  | ScrabAf scrabsa |
| Sri Lanka | Sri Lanka Scrabble |  |  |
| UAE |  | $\frac{\text { UAE Scrabble }}{\text { Club }}$ |  |
| UK | Association of British Scrabble Players (see below) | British Scrabble | uk-scrabble |
| USA | North American Scrabble Players Association | NASPA | naspa-pro |

## SPECIAL OFFER FOR UK READERS

To celebrate the launch of The Scrabble Player's Handbook, the Association of British Scrabble Players (ABSP) is offering half price membership to anyone joining for the first time during January 2013.

That's just $£ 7.50$ for six emailed copies of Onboard magazine, plus the ABSP members' handbook and discounts on event entry fees. Click the link below to take advantage of this fantastic offer!
http://www.absp.org.uk/absp/newmemberoffer.shtml

## Scrabble content in the media

The Times (UK) - Scrabble puzzles every weekday and a strategy column every Saturday (by Allan Simmons)
The Daily Telegraph (UK) - Scrabble target puzzle every Saturday (by Allan Simmons) The Guardian (UK) - Scrabble target puzzle every Saturday (by Stewart Holden)

## 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 for reasons of economy. However at tournament level many players purchase circular boards which have the advantage of rotating within their own area (see picture). Generic high quality round boards are available from www.samtimer.com or www.genetimer.com while beautiful hand-painted personalised circular boards can be found at www.customscrabbleboards.com.

## Tiles

Tiles must be smooth and "non-braillable" 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 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 10 pts per minute or part-minute. The most popular brands are the SamTimer and the Adjudicator available directly from www.samtimer.com and www.genetimer.com respectively or via local distributors.

## 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 Tilefish (www.tilefish.co.uk) 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.

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.

[^16]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 North America, though this is more correctly called TWL or OTaCWL. Recent editions of the OSPD are expurgated and do 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 which 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,

[^17]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 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.

## 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 GENETICSES*); 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\&sups) 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\&sups are supported in an unabridged dictionary such as Webster's $3^{\text {rd }}$ International.

## Examples: CHOICE CHOICER CHOICEST; DWARF DWARFER DWARFEST

The adjective is one syllable and the comps\&sups 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 SKEIGHEST

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 $\mathrm{x} y$ 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 pluralized.
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

[^18]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 comps\&sups 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 TVL content for the sake of greater consistency across the official word list.

## Two and Three Letter Words

Complete lists of the 2 s and 3 s 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 $\quad n$ a type of volcanic rock $>$ AAS
AB $\quad n$ short for abdominal muscle $>\mathrm{ABS}$
AD $\quad n$ short for advertisement $>$ ADS
AE adj a Scots word for one
AG adj agricultural an agriculture $>$ AGS
AH
int an interjection expressing surprise, joy etc a vb to say ah > AHS, AHING, AHED
$n$ the three-toed sloth > AIS
$n$ an E. Indian shrub > ALS
$v b 1^{\text {st }}$ person present tense of BE
adj the indefinite article a $n$ a dialect form of if, an additional consideration, as in ifs and ans $>$ ANS
$n$ the letter $r>A R S$
adv in whatever way a conj because, since a $n$ a Norse god > AESIR; a gravel ridge or kame > ASAR; a Roman coin > ASSES
prep a preposition denoting position in space or time a $n$ a monetary unit of Laos $>$ ATS
int an interjection expressing disappointment, sympathy etc $a$ adj all
$n$ an axe > AXES
int yes a $n$ an affirmative vote $>$ AYS
$n$ in ancient Egyptian religion, the soul > BAS
vb to exist > AM, (obs.) ART, IS, ARE, BEING, WAS, (obs.) WAST, (obs.) WERT, WERE, BEEN
$n$ short for bisexual > BIS
int an exclamation used to startle someone a $n$ a fellow; pal, buddy > BOS
prep indicating the doer of an action, nearness, movement past, time before or during which, etc adv near a $n$
a pass to the next round (of a competition, etc.) $>$ BYS
pron a dialect form of I
$n$ a heavy Burmese knife > DAS
prep from (as used in names)
$p l<$ DEUS, a god
$v b$ to perform > DOES, (obs.) DOEST, (obs.) DOST, (obs.) DOETH, (obs.) DOTH, (obs.) DOEN, DOING, DID,
(obs.) DIDST, DONE a $n$ a party, a celebration > DOS
$n$ an old word for river $>$ EAS
$n$ short for education $>$ EDS
$n$ an old word for eye $>$ EEN
$n$ the letter $\mathrm{f}>\mathrm{EFS}$
int an interjection expressing enquiry a vb to say 'eh' > EHS, EHING, EHED
$n$ the letter L; an elevated railroad > ELS
$n$ a unit of measurement in printing, the square of a body of any size of type $>$ EMS
$n$ a unit of measurement in printing, half the width of an em > ENS
int an interjection expressing hesitation
$n$ the letter $S>E S E S$
$v b$ past tense of EAT, to consume by mouth
prep not including a $n$ a former wife, husband etc a $v b$ to cut out, delete $>$ EXES, EXING, EXED
$n$ a musical note, as in sol-fa > FAS
$n$ a Hebrew letter > FES
int an interjection expressing reproach
$n$ a loose-fitting white suit worn in judo, karate, and other martial arts > GIS
$n$ a turn; a Japanese board game $>$ GOS a vb to pass from one place to another $>$ GOES, (obs.) GOEST, (obs.)
GOETH, GOING, WENT, GONE
$n$ a kind of violin formerly used in the Shetlands $>$ GUS
int an interjection expressing eg surprise
pron the masculine singular pronoun a $n$ a male person or animal > HES; a int an exclamation expressing amusement
int an interjection expressing thoughtful consideration
int an interjection calling attention a $n$ cessation a $v b$ to stop $>$ HOS, HOING, HOED
$n$ the mind's instinctive unconscious energies; a fish of the carp family > IDS
conj on condition that a $n$ a condition > IFS
prep indicating position inside, state or situation, etc a adv indicating position inside, entry into, etc a adj
fashionable $a n$ a way of approaching or befriending a person $a v b$ to take in > INS, INNING, INNED
int an interjection expressing joy, triumph, grief a $n$ a cry of 'io' > IOS
$v b$ third person present tense of $B E$, to exist
pron the neuter of he she him or her a $n$ a player whose turn it is to catch the others in children's games
int a S. African word for yes
$n$ a Scots word for loved one > JOES
$n$ in ancient Egypt, an attendant spirit supposedly dwelling as a vital force in a man or statue a vb to serve, help
> KAS, KAING, KAED
$n$ the spirit of Japanese martial art > KIS
$n$ a Maori digging-stick > KOS
pl cattle
$n$ a musical note > LAS
$n$ a Chinese unit of distance > LIS
int an interjection meaning see, look
$n$ colloquial for mother > MAS
pron the objective first person pronoun $>n$ a musical note $>$ MES
$n$ a musical note > MIS
int an interjection expressing agreement or enjoyment
$n$ a moment > MOS
$n$ a letter of the Greek alphabet > MUS
adj of or belonging to me; a int an exclamation of surprise or awe
adv no, not at all
adv not a conj nor
int expressing negation adj not any, not a adv expressing negation a $n$ a no vote $>$ NOS or NOES
$n$ a letter of the Greek alphabet > NUS
adj near a vb to approach > NYES, NYING, NYED
$n$ an objection > OBS
$n$ a hypothetical force; an old word for god, often used as a mild oath > ODS
$n$ a grandchild > OES
prep belonging to
int an interjection a $v b$ to say oh > OHS, OHING, OHED
int an interjection used to express attention a $n$ a New Zealand bird, the grey-faced petrel > OIS
$n$ an intoned Hindu sacred symbol > OMS
adv in contact with the upper surface of a adv in operation a adj operating a $n$ the side of the field on which the batsman stands a $v b$ to go on with, to put up with > ONS, ONNING, ONNED
$n$ a Scots word for wool > OOS
$n$ short for operation > OPS
conj a conjunction linking alternatives a adj of the metal gold an the heraldic tincture gold > ORS
$n$ a bone > OSSA; a mouthlike opening > ORA; an esker > OSAR
adj an interjection expressing concession a $n$ a bloke $>$ OUS or OUENS
int an interjection expressing pain
$n$ a bovine animal > OXEN; a clumsy person > OXES
$n$ a grandchild > OYS
$n$ a child's word for father; a Maori hill fort > PAS
$n$ a Hebrew letter > PES
$n$ a letter in the Greek alphabet > PIS a vb to mix type indiscriminately > PIS, PIING, PIED
$n$ chamberpot > POS
$n$ the physical life-force postulated by certain Chinese philosophers > QIS
prep concerning a $n$ (in tonic sol-fa) the second degree of any major scale $>$ RES
int an interjection requesting silence
$n$ an earlier form of ti, a musical note > SIS
adj in such a way, to such a degree; a int an exclamation of surprise, triumph, or realization a $n$ (in tonic sol-fa)
the fifth degree of any major scale > SOS
int an interjection requesting silence
int an interjection expressing thanks a $n$ a thank-you > TAS
$n$ the seventh degree of any major scale > TES

TI $\quad n$ a musical note; a small Pacific tree > TIS
$n$ a musical note; a small Pacific tree > TIS
prep in the direction of, towards a adv a closed position
$v b$ to dread, loathe > UGS, UGGING, UGGED
int an interjection expressing surprise
int an interjection expressing doubt or hesitation a vb to express doubt or hesitation > UMS, UMMING, UMMED
pron a spelling of 'one' intended to reflect a dialectal or informal pronunciation $>$ UNS
adv towards a higher place a adj of a high or higher position $a v b$ to move up $>$ UPS, UPPING, UPPED
int an interjection expressing hesitation
pron the objective case of the first person plural pronoun
$n$ a musical note > UTS
pron the subjective case of the first person plural pronoun
$n$ an old form of woe $>$ WOS
$n$ a letter in the Greek alphabet $>$ XIS
$n$ a Vietnamese monetary unit > XU
pron an American form of you
pron an old form of you a adj an old form of the
int an interjection calling for effort or attention
$n$ a precious jade $>$ YUS
$n$ short for pizza > ZAS
$n$ a cross between a yak and a cow $>$ ZOS

## Three-letter words

AAH int an interjection expressing surprise $a b b$ to express surprise $>$ AAHS, AAHING, AAHED
AAL $\quad n$ an E. Indian shrub > AALS
AAS $\quad p l$ < AA, a type of lava
ABA $\quad n$ a Syrian cloth of goat's or camel's hair; an outer garment made from this > ABAS
ABB $\quad n$ a textile yarn $>$ ABBS
ABO $n$ short for an aboriginal $>A B O S$
ABS $\quad p l<A B$, an abdominal muscle
ABY $\quad v b$ to pay the penalty for > ABYS, ABYING, ABOUGHT
ACE $\quad n$ the one in cards a $v b$ to play a winning serve in tennis > ACES, ACING, ACED
ACH int an interjection expressing regret or impatience
$A C T \quad v b$ to do in a specified way > ACTS, ACTING, ACTED
ADD $\quad v b$ to make an addition > ADDS, ADDED, ADDING
ADO $n$ bustle or fuss $>$ ADOS
ADS $\quad p l<A D$, an advertisement
ADZ $\quad n$ a cutting tool with an arched blade set at right angles to the handle > ADZES
AFF adv a Scots word for off
AFT adv behind; near the stern of a vessel, etc
AGA $\quad n$ a Turkish commander > AGAS
AGE $\quad n$ duration of life a $v b$ to grow old $>$ AGES, AGING or AGEING, AGED
AGO adv past; since
AGS $\quad \mathrm{pl}$ <AG, agriculture
AHA int an interjection expressing exultation or pleasure
AHI $\quad n$ the yellowfin tuna $>$ AHIS
AHS $\quad v b 3^{\text {rd }}$ person singular of AH, to say ah
AIA $\quad n$ an Indian nurse-maid > AIAS
AID $\quad n$ help, assistance $a v b$ to help or assist > AIDS, AIDING, AIDED
AIL $\quad v b$ to be indisposed $>$ AILS, AILING, AILED
AIM $\quad v b$ to point or direct $>$ AIMS, AIMING, AIMED
AIN $\quad n$ a letter of the Hebrew alphabet > AINS
AIR $\quad n$ the mixture of gases breathed by people and animals a $v b$ to make known publicly > AIRS, AIRING, AIRED
AIS $\quad p l$ < AI, a kind of sloth
AIT $n$ a small island in a river > AITS
AKA $\quad n$ a New Zealand vine $>$ AKAS
AKE $\quad v b$ an old spelling of ache > AKES, AKING, AKED
ALA $\quad n$ an outgrowth on a fruit $>$ ALAE
ALB $n$ a priest's long, white vestment > ALBS
ALE $\quad n$ a kind of beer, made without using hops as a flavouring > ALES
ALF $\quad n$ an uncultivated Australian > ALFS
ALL adj the whole quantity of adv wholly a $n$ the whole; everything and everybody $>$ ALLS
ALP $n$ a mountain > ALPS
ALS $\quad \mathrm{pl}$ < AL, an E. Indian shrub
ALT $\quad n$ a high tone in a voice or instrument > ALTS
ALU $\quad n$ in India, a potato > ALUS
AMA $n$ a native maidservant or child's nurse, especially a wet nurse > AMAS
AME $\quad n$ a French word for soul > AMES
AMI $\quad n$ a French word for friend $>$ AMIS
AMP $n$ short for ampere or amplifier a $v b$ to excite > AMPS, AMPING, AMPED
AMU $\quad n$ a unit of atomic mass $>$ AMUS
ANA $\quad n$ a collection of someone's table-talk > ANAS
AND conj a conjunction indicating addition $a n$ the symbol ampersand; something added $>$ ANDS
ANE $n$ one > ANES
ANI $\quad n$ a tropical American bird $>$ ANIS
ANN $\quad n$ the half-year's stipend payable to a minister's wife on his death > ANNS
ANS $\quad p l$ <AN, as in ifs and ans, things that might have happened, but which did not
ANT $\quad n$ a small industrious insect > ANTS
ANY adj some; whichever, no matter which
APE $n$ an anthropoid primate a $v b$ to imitate $>$ APES, APING, APED
APO $\quad n$ short for apolipoprotein, a type of protein > APOS
APP $\quad n$ short for application program $>$ APPS

ARC $\quad n$ a part of the circumference of a circle or other curve a $v b$ to form an arc $>$ ARCS, ARCING or ARCKING,
ARCED or ARCKED

ARE $\quad n$ a unit of metric land measure $>$ ARES
ARF $\quad n$ a barking sound $>$ ARFS
ARK
ARM
ARS
ART
adj suited to > APTER, APTEST, APTLY a vb an old form of adapt > APTS, APTING, APTED
$n$ short for arbitrageur, a stocks and shares shyster > ARBS
$n$ a chest or coffer a $v b$ to place in an ark > ARKS, ARKING, ARKED
$n$ a limb; a weapon $a v b$ to provide with weapons $>$ ARMS, ARMING, ARMED
$p l<A R$, the letter R
$n$ the creation of works of beauty; a human skill > ARTS
adj any
$n$ the dust or remains of anything burnt $a b$ to convert something into ash > ASHES, ASHING, ASHED
$v b$ to request, inquire or invite > ASKS, ASKING, ASKED
$n$ a venomous snake $>$ ASPS
$n$ a longhaired animal like a small horse; a stupid person > ASSES
$n$ reckless ambition that drives one to ruin $>$ ATES
$p l<A T$, monetary unit of Laos
$n$ a monetary unit of Laos $>$ ATT
$n$ the yellow-eye mullet > AUAS
int an exclamation of pain, distress or astonishment
$n$ an elf's child > AUFS
$n$ a type of sea-bird > AUKS
$n$ an aromatic plant of the pepper family; a narcotic drink prepared from its root and stem > AVAS
$n$ a recitation of the prayer to the Virgin Mary > AVES
$n$ a monetary unit of Macao > AVOS
adv a Scots form of away
$n$ reverential wonder or fear $a v b$ to strike with awe $>$ AWES, AWING or AWEING, AWED
$n$ a computer-programming language used for data processing $>$ AWKS
$n$ a pointed tool for boring > AWLS
$n$ a beard on grass a $v b$ to shelter with an awning $>$ AWNS, AWNED, AWNING
$n$ a tool for chopping $a v b$ to chop or cut down $>$ AXES, AXING, AXED
int yes a $n$ an affirmative vote > AYES
pl <AY, an affirmative vote
$n$ a small edible Japanese fish > AYUS
adj of compounds, containing nitrogen, as in azo dye
$v b$ to bleat as a sheep > BAAS, BAAING, BAAED
$n$ short for baccalaureate $>$ BACS
adj evil, wicked > BADDER, BADDEST, BADLY a $n$ something evil > BADS
$n$ a receptacle for containing something $a v b$ to put into a bag $>$ BAGS, BAGGING, BAGGED
int an interjection expressing disgust or contempt
$n$ short for balmoral, a type of Scots bonnet or boot > BALS
$v b$ to hoax or cheat > BAMS, BAMMING, BAMMED
$n$ a monetary unit of Romania > BANI a $v b$ to forbid or prohibit > BANS, BANNING, BANNED
$n$ a large, flat breakfast roll > BAPS
$n$ a rod, a barrier a $v b$ to obstruct or prevent > BARS, BARRING, BARRED
$p l<B A$, the soul in ancient Egyptian religion
$n$ a flying mammal; an implement for striking a ball $a v b$ to strike with a bat > BATS, BATTING, BATTED
$n$ a wide semicircular indentation of a coastline $a v b$ to bark or howl > BAYS, BAYING, BAYED
$n$ a place to sleep on a $v b$ to put to bed $>$ BEDS, BEDDING, BEDDED
$n$ an insect that makes honey $>$ BEES
$v b$ to ask for > BEGS, BEGGING, BEGGED
$n$ a measure of noise $>$ BELS
$n$ a Scots word for a mountain $>$ BENS
$n$ a letter of the Hebrew alphabet > BESES
$n$ a wager $a v b$ to wager $>B E T S$, BETTING, BET or BETTED
$n$ a Turkish governor > BEYS
$n$ the second tine of a deer's horn > BEZES
$n$ a cloth or plastic shield put under a young child's chin a $v b$ to tipple > BIBS, BIBBING, BIBBED
adj sizeable > BIGGER, BIGGEST, BIGLY a vb a Scots word for build > BIGS, BIGGING, BIGGED

BRO $\quad n$ a place for which one feels a strong affinity $>$ BROS
BRR int an interjection expressing a feeling of cold

CAM $\quad n$ an irregular projection on a revolving shaft or rotating cylinder $a v b$ to whiten with camstone $>$ CAMS, CAMMING, CAMMED
CAN $\quad n$ a container of tin-plate $a v b$ to store in such a container $>$ CANS, CANNING, CANNED; to be able $>$ CAN, COULD, COULDST, COULDEST
CAP $\quad n$ a flat brimless hat a $v b$ to put a cap on something $>$ CAPS, CAPPING, CAPPED
CAR $\quad n$ a self-propelled wheeled vehicle $>$ CARS
CAT $\quad n$ a carnivore of the genus Felix a vb to vomit > CATS, CATTING, CATTED
CAW $\quad n$ the cry of a crow a $v b$ to cry as a crow > CAWS, CAWING, CAWED
CAY $\quad n$ a small low island of coral, sand etc $>$ CAYS
CAZ adj colloquial for casual
CEE $\quad n$ the letter $C>C E E S$
CEL $\quad n$ short for celluloid $>$ CELS
CEP $\quad n$ a kind of edible mushroom $>$ CEPS
CHA $\quad n$ a colloquial word for tea $>$ CHAS
CHE pron a dialect form of I
CHI $\quad n$ the twenty-second letter of the Greek alphabet $>$ CHIS
CID $\quad n$ a chief, captain or hero $>$ CIDS
CIG $n$ cigarette $>$ CIGS

[^19]COG $\quad n$ a projection, eg on a toothed wheel a vb to furnish with cogs; to cheat at dice $>$ COGS, COGGING, COGGED
COL $\quad n$ a pass in a mountain range $>$ COLS
CON $\quad n$ a trick or swindle a vb to trick, or persuade by dishonest means > CONS, CONNING, CONNED; an old word for to know, study > CONS, CONNING, COND, (archaic) YCOND
vb to make a sound like a dove > COOS, COOING, COOED
COO
COP
adj having certain atoms on the same side of the molecule $n$ a contemptuous term for one who is not a gentleman > CITS vb to seize or steal > CLIES, CLYING, CLIED $n$ a male swan a $v b$ to strike $>$ COBS, COBBING, COBBED
$n$ a kind of food fish a $v b$ to hoax or make fun of $>$ CODS, CODDING, CODDED
$n$ a policeman a $v b$ to capture $>$ COPS, COPPING, COPPED
$n$ a Hebrew measure $>$ CORS
$n$ a crisp, long-leaved lettuce > COSES
$n$ a small bed for a young child > COTS a vb to entangle > COTS, COTTING, COTTED
$n$ the female of bovine and some other animals > COWS, KINE, KY, KYE a vb to subdue > COWS, COWING, COWED
$n$ coxswain a $v b$ to steer a rowing boat > COXES, COXING, COXED
adj modest, bashful > COYER, COYEST, COYLY a vb an old word meaning to affect coyness > COYS,
COYING, COYED
$n$ colloquial for cousin > COZZES
$n$ a vineyard $>$ CRUS
$n$ a sound of pain, grief etc. a vb to utter a sound of pain or grief $>$ CRIES, CRYING, CRIED
$n$ the young of certain carnivorous animals a $v b$ to produce cubs > CUBS, CUBBING, CUBBED
$n$ food chewed again by a ruminating animal > CUDS
$n$ the last words of an actor's speech serving as a signal to the next speaker to begin $a v b$ to give a cue as a
signal > CUES, CUING or CUEING, CUED
prep with the addition of a $n$ ejaculated sperm > CUMS
$n$ a drinking vessel, roughly hemispherical, usually with one handle a $v b$ to form into a cup shape > CUPS, CUPPING, CUPPED
$n$ a worthless mongrel dog > CURS
$n$ an incision; a reduction a vb to make an incision in; to reduce > CUTS, CUTTING, CUT
$n$ colloquial for cousin > CUZZES
$n$ a Welsh word for a valley > CWMS
$n$ a light touch a $v b$ to touch or press gently $>$ DABS, DABBING, DABBED
$n$ colloquial for father $a v b$ to thump > DADS, DADDING, DADDED
$v b$ a Scots word for do > DAES, DAEING, DONE, DID
$n$ a tuft of sheep's wool $a b$ to cut the dags off sheep > DAGS, DAGGING, DAGGED
$n$ a Burmese knife > DAHS
$n$ in India, the mail or post > DAKS
$n$ a kind of Indian edible pea > DALS
$n$ an embankment to restrain water $a v b$ to restrain water with an embankment or bank $>$ DAMS, DAMMING, DAMMED
$n$ a level of efficiency in Japanese combative sports > DANS
$v b$ to dip bait gently into the water when fishing > DAPS, DAPPING, DAPPED
$p l<\operatorname{DA}$, a kind of Burmese knife
$n$ a bird of the crow family a $v b$ to dawn > DAWS, DAWING, DAWED, DAWEN
$n$ the time when it is light > DAYS
$n$ short for debutante > DEBS
$n$ the ketter $D$ a $v b$ a substitute for damn > DEES, DEEING, DEED
adj excellent, brilliant > DEFFER, DEFFEST, DEFFLY
vb to water (eg a plant) > DEGS, DEGGING, DEGGED
$p l<$ DEUS, god
$n$ a mathematical symbol, aka nabla > DELS
$n$ the hollow lair of a wild animal $a v b$ to retire to a den $>$ DENS, DENNING, DENNED
$n$ a god; a good spirit > DEVS
$n$ moisture deposited from the air on cooling a $v b$ to moisten as with dew $>$ DEWS, DEWING, DEWED
$n$ a pill containing Dexedrine, a sulfate used as a stimulant $>$ DEXES
$n$ formerly, the pasha of Algiers > DEYS
$n$ one of the small bones of a sheep's leg a $v b$ to dip bait gently into the water when fishing > DIBS, DIBBING, DIBBED
vb past tense of DO, to act
$n$ a shaped block used to shape metal > DIES; a dice > DICE a $v b$ to depart from life $>$ DIES, DYING, DIED; to

[^20]cut or shape with a die > DIES, DIEING, DIED

DIG $\quad n$ an excavation a vb to make a hole, excavate > DIGS, DIGGING, DIGGED or DUG
DIM adj not bright > DIMMER, DIMMEST, DIMLY a vb to make dim > DIMS, DIMMING, DIMMED
DRY adj not wet > DRIER or DRYER, DRIEST or DRYEST, DRILY or DRYLY a $n$ a prohibitionist $>$ DRYS a $v b$ to
make dry > DRIES, DRYING, DRIED
$n$ in the Himalayas, a cross between a yak and a cow > DSOS
$v b$ to add sound effects, etc., to > DUBS, DUBBING, DUBBED
$n$ something or someone ineffectual > DUDS
adj required > DULY a vb to endue > DUES, DUING, DUED
$n$ the teat or udder of a female mammal > DUGS
int an ironic response to a question
$p l<$ DUO, two people considered a pair for a specific reason
adj grey-brown > DUNNER, DUNNEST a $n$ a grey-brown colour a $v b$ to press for payment > DUNS, DUNNING,
DUNNED
$n$ two people considered a pair for a specific reason > DUI or DUOS
$v b$ to undo > DUPS, DUPPED, DUPPING
$n$ a leader > DUCES or DUXES
$n$ a colour used to stain a vb to colour with dye > DYES, DYEING, DYED
$n$ in the Himalayas, a cross between a yak and a cow > DZOS
$v b$ a Shakespearean word meaning to give birth to > EANS, EANING, EANED
$n$ the organ of hearing a $v b$ to plough or till $>$ EARS, EARING, EARED
$p l<E A$, a river
$v b$ to consume by mouth > EATS, EATING, EATEN, ATE or (obs.) ET
$n$ water > EAUS or EAUX
$n$ the recession of the tide a $v b$ to move back from the land, to recede $>$ EBBS, EBBING, EBBED
$v b$ an obsolete form of eke > ECHES, ECHING, ECHED
$n$ short for ecology > ECOS
$n$ a European unit of currency $>$ ECUS
$n$ a letter used in old English > EDHS
$p l<E D$, education
int an interjection expressing fright
$n$ a long, smooth, cylindrical fish > EELS, EELY
$p l<E E$, eye
$v b$ a euphemism for to fuck > EFFS, EFFING, EFFED
$p l<E F$, the letter F
$n$ a newt > EFTS
EGGS, EGGING, EGGED

ELF $\quad n$ a fairy-like being $>$ ELVES a $v b$ a Shakespearean word meaning to entangle hair $>$ ELFS, ELFING, ELFED
ELK $\quad n$ a kind of large deer $>$ ELKS
ELL $\quad n$ an old measure of length, used especially for cloth > ELLS
ELM $\quad n$ a kind of tree $>$ ELMS, ELMEN, ELMY
ELS $\quad p l<E L$, an elevated railroad
ELT $\quad n$ a young sow $>$ ELTS
EME $\quad n$ an old word for uncle $>$ EMES
EMO $\quad n$ a type of music combining traditional hard rock with personal and emotional lyrics $>$ EMOS
EMS

END $\quad n$ the last point or portion $a v b$ to finish or close $>$ ENDS, ENDING, ENDED
ENE $\quad n$ a poetic word for evening $>$ ENES
ENG $\quad n$ a phonetic symbol representing the sound ng, aka agma > ENGS
ENS $\quad n$ being, existence; an entity > ENTIA
EON $\quad n$ a long period of time $>$ EONS
ERA $\quad n$ a series of years; an age $>$ ERAS
ERE adv before a $v b$ an old word for to plough $>$ ERES, ERING, ERED
ERF $\quad n$ in S. Africa, a garden plot > ERVEN
ERG $\quad n$ 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 $\quad v b$ to earn > ERNS, ERNING, ERNED
ERR $\quad v b$ to make a mistake $>$ ERRS, ERRING, ERRED
ERS $\quad n$ the bitter vetch $>$ ERSES
ESS $\quad n$ the letter $S>E S S E S$
EST $\quad n$ a programme designed to develop human potential (Erhard Seminars Training) $>$ ESTS
ETA $\quad n$ a letter of the Greek alphabet > ETAS
ETH $\quad n$ a letter used in old English, same as edh $>$ ETHS
EUK $\quad n$ an old word for itch a $v b$ to itch $>$ EUKS, EUKING, EUKED
EVE $\quad n$ a poetic word for evening $>$ EVES
EVO $\quad n$ Australian slang for evening $>$ EVOS
EWE $\quad n$ a female sheep > EWES
EWK $\quad n$ an old word for itch $a v b$ to itch $>$ EWKS, EWKING, EWKED
EWT $\quad n$ an old word for newt $>$ EWTS
EXO adj Australian slang for excellent
EYE $\quad n$ the organ of sight $>$ EYES, (obs.) EEN, EINE, EYNE, (US) EYEN a $v b$ to look at carefully $>$ EYES, EYING or EYEING, EYED
FAA $\quad v b$ a Scots word for fall > FAAS, FAAING, FELL, FAAN or FALLEN
FAB adj marvellous > FABBER, FABBEST a $n$ a fabrication $>$ FABS
FAD $\quad n$ a craze $>$ FADS, FADDY
FAE prep a Scots word for from
FAG $\quad n$ a tiresome task; (offensive slang) a homosexual $a v b$ to work, or be worked, hard > FAGS, FAGGING,

## FAGGED

FAH $\quad n$ a musical note $>$ FAHS
FAN $\quad n$ a instrument used for cooling a $v b$ to cool, as with a fan > FANS, FANNING, FANNED
FAP adj fuddled or drunk
FAR adj distant > FARTHER or FURTHER, FARTHEST or FURTHEST $a$ adv a long way a vb to remove to a distance > FARS, FARRING, FARRED
$p l<F A$, a musical note
FAT adj stoutly built > FATTER, FATTEST, FATLY a $n$ a substance found in adipose tissue a vb to make or grow fat > FATS, FATTING, FATTED
$n$ a gypsy > FAWS
$n$ facsimile $a v b$ to send messages via a machine that scans electronically $>$ FAXES, FAXING, FAXED
adj whimsical > FAYER, FAYEST a $n$ a fairy a $v b$ to clean out esp a ditch > FAYS, FAYING, FAYED
FED $\quad n$ a federal agent $>$ FEDS
FEE
$n$ the price paid for services $a v b$ to pay a fee to $>$ FEES, FEEING, FEED
FEU $\quad n$ a tenure where the vassal, in place of military services, makes a return in grain or in money a vb to grant or
hold land in feu land tenure > FEUS, FEUING, FEUED
adj foreseeing the future > FEYER, FEYEST, FEYLY a vb to clean out, especially a ditch > FEYS, FEYING,
FEYED
FEZ $\quad n$ a red brimless cap of wool or felt > FEZES or FEZZES, FEZZED
FIB $\quad n$ a small lie $a v b$ to tell a small lie $>$ FIBS, FIBBING, FIBBED
FID $\quad n$ a conical pin of hard wood $>$ FIDS
FIE int an interjection denoting disapproval a adj whimsical, fey > FIER, FIEST
FIG $\quad n$ a shrub of the mulberry family; its fruit $a v b$ to dress up > FIGS, FIGGING, FIGGED
FIL $\quad n$ the shaft of a vehicle > FILS
FIN $\quad n$ an organ by which an aquatic animal steers, balances or swims a $v b$ to equip with fins $>$ FINS, FINNING,
FINNED
$n$ a kind of conifer $>$ FIRS
adj healthy, suitable > FITTER, FITTEST, FITLY a vb to make suitable > FITS, FITTING, FITTED
$v b$ to make firm, to arrange > FIXES, FIXING, FIXED or FIXT
$n$ a sputtering sound $a v b$ to make a hissing or sputtering sound $>$ FIZZES, FIZZING, FIZZED
FLU $\quad n$ influenza > FLUS
FLY adj surreptitious or sly > FLIER or FLYER, FLIEST or FLYEST a $n$ any insect of the order Diptera a vb to travel
through the air > FLIES, FLYING, FLOWN, FLEW; to hit a ball high into the air in baseball > FLIES, FLYING,
FLIED
$v b$ to put off $>$ FOBS, FOBBING, FOBBED
$n$ an enemy $>$ FOES or (Spenser) FOEN or FONE
$n$ a thick cloudlike mist near the ground $a v b$ to be affected by fog $>$ FOGS, FOGGING, FOGGED
int an expression of disgust
$n$ an old word for fool > FONLY a $v b$ to fool, be foolish > FONS, FONNING, FONNED
$n$ an affected dandy a $v b$ to deceive > FOPS, FOPPING, FOPPED
prep in the place of; in favour of; towards
adj a Scots word for drunk > FOUER, FOUEST a $n$ a bushel > FOUS
FOX $\quad n$ a dog-like animal a $v b$ to act cunningly, to cheat > FOXES, FOXING, FOXED
FOY $\quad n$ a parting entertainment or gift; a Spenserian word for allegiance, loyalty > FOYS
FRA $n$ brother $>$ FRAS
FRO prep from a $n$ an African hairstyle $>$ FROS
FRY $\quad v b$ to cook in oil or fat $>$ FRIES, FRYING, FRIED
FUB $\quad v b$ to put off $>$ FUBS, FUBBING, FUBBED
FUD $\quad n$ a rabbit or hare's tail > FUDS
FUG $\quad n$ a very hot, close atmosphere a $v b$ to cause a fug in > FUGS, FUGGING, FUGGED
FUM $\quad n$ a fabulous bird in Chinese myth > FUMS
FUN adj providing enjoyment $>$ FUNNER, FUNNEST a $n$ pleasure, enjoyment $a v b$ to play, frolic $>$ FUNS, FUNNING,
FUNNED
FUR $\quad n$ the thick, soft, fine hair of certain animals a $v b$ to cover or coat with fur $>$ FURS, FURRING, FURRED
GAB $\quad n$ chat, gossip $a v b$ to chatter $>$ GABS, GABBING, GABBED
GAD $\quad v b$ to wander about idly > GADS, GADDING, GADDED
GAE $\quad v b$ a Scots word for go > GAES, GAEING, GAEN, GAUN, GAED
GAG $\quad n$ something put into the mouth or over it to enforce silence a $v b$ to silence $>$ GAGS, GAGGING, GAGGED
GAK $n$ slang for cocaine $>$ GAKS
GAL $\quad n$ colloquial for girl > GALS
GAM $\quad n$ a school of whales; a social visit between whalers a $v b$ to join up in a gam > GAMS, GAMMING, GAMMED
GAN $\quad v b$ a dialect word for go > GANS, GANNING, GANNED
GAP $\quad n$ an opening or breach $a v b$ to make a gap in > GAPS, GAPPING, GAPPED
GAR vb a Scots word for compel > GARS, GARRING, GARRED or GART
GAS $\quad n$ a state of matter $>$ GASES a $v b$ to poison with gas $>$ GASSES, GASSING, GASSED
GAT $\quad n$ a slang word for pistol $>$ GATS
GAU $\quad n$ a German political district of the Nazi regime > GAUS
GAW $\quad n$ an imperfect rainbow or other supposed sign of coming weather $>$ GAWS

The Scrabble Player's Handbook is available for free download at www.scrabbleplayershandbook.com

GIT $\quad n$ a stupid person a vb to get $>$ GITS, GITTING, GITTED
GJU $\quad n$ a type of violin formerly used in Shetland $>$ GJUS
GNU $\quad n$ a kind of African antelope $>$ GNUS
GOA $\quad n$ a kind of Tibetan gazelle, grey-brown with backward-curving horns $>$ GOAS
GOB $\quad n$ the mouth $a v b$ to spit $>$ GOBS, GOBBING, GOBBED
GOD $\quad n$ a superhuman being, an object of worship a $v b$ to deify $>$ GODS, GODDING, GODDED
GOE $\quad n$ a gully or creek $>$ GOES
GON $\quad n$ a geometrical grade $>$ GONS
GOO $n$ a sticky substance $>$ GOOS
GOR int an interjection used as a mild oath
GOS

GUB
GUE $\quad n$ a violin formerly used in Shetland $>$ GUES
GUL $\quad n$ a design used in oriental carpets > GULS
GUM $\quad n$ an adhesive substance that collects in or exudes from certain plants a $v b$ to smear or coat with gum $>$ GUMS, GUMMING, GUMMED
GUN $\quad n$ a weapon for discharging explosive projectiles a $v b$ to discharge such projectiles $>$ GUNS, GUNNING, GUNNED
$n$ gossip, prattle > GUPS
$n$ an unrefined, sweet cane sugar; a felt tent > GURS
$p l<G U$, a Shetland violin
$n$ the intestine $a v b$ to take the guts out of (a fish, etc.) $>$ GUTS, GUTTING, GUTTED
$n$ short for governor > GUVS
$n$ a person $a v b$ to make fun of $>$ GUYS, GUYING, GUYED
$n$ short for gymnasium > GYMS
$n$ pain, torture a $v b$ to swindle $>$ GYPS, GYPPING, GYPPED
$v b$ to hold > HADS, HADDING, HAD, HADDEN
$v b$ a Scots word for have > HAES, HAEING, HAEN, HAED
$n$ an ugly old woman a $v b$ a Scots word for to hack or hew $>$ HAGS, HAGGING, HAGGED
int a sound of surprise > HAHS
HAJ $\quad n$ a Muslim pilgrimage to Mecca > HAJES
HAM $\quad n$ the thigh of an animal, esp of a pig salted and dried; a bad actor a vb to overact, exaggerate $>$ HAMS, HAMMING, HAMMED
HAN vb 3rd person plural form of HAVE, to possess
HAO $\quad n$ a monetary unit of Vietnam > HAOS
adj cheerful > GAYER, GAYEST, GAILY or GAYLY a $n$ a homosexual > GAYS
$n$ a pike $>$ GEDS
$v b$ of horses, to urge on > GEES, GEEING, GEED
$n$ a jelly-like apparently solid colloidal solution a vb to form a gelatinous substance > GELS, GELLING, GELLED
$n$ any precious stone, especially when cut $a v b$ to adorn with gems $>$ GEMS, GEMMING, GEMMED
$n$ short for general information $a v b$ to gain information $>$ GENS, GENNING, GENNED
$n$ a gully or creek $>$ GEOS
$n$ in Mongolia, a kind of felt tent, a yurt > GERS
$n$ a divorce by Jewish law > GITTIN a vb to obtain > GETS, GETTING, GOTTEN, GOT
adj considerable > GEYER, GEYEST
$n$ clarified butter > GHIS
$n$ a wedge-shaped piece of metal a $v b$ to fasten with a gib $>$ GIBS, GIBBING, GIBBED
$n$ a disease of sheep > GIDS
$v b$ a Scots word for give > GIES, GIEING, GIEN, GIED
conj an old form of if
$n$ an engagement, esp of a band or pop group for one performance only a vb to play a gig > GIGS, GIGGING,
GIGGED
$n$ an alcoholic drink a $v b$ to process cotton $>$ GINS, GINNING, GINNED; an old word for begin > GINS,
GINNING, GAN or GUNNEN
$n$ a gully or creek $>$ GIOS
$v b$ to swindle > GIPS, GIPPING, GIPPED
$p l<G O$, a Japanese board game
vb past tense of GET, to obtain
$n$ short for governor $>$ GOVS
$n$ gaseous oxygen > GOXES
$n$ a Jewish word for a non-Jew > GOYIM or GOYS
$n$ a white man a $v b$ to strike on the mouth > GUBS, GUBBING, GUBBED
GUR $\quad n$ an unrefined, sweet cane sugar; a felt tent > GURS
GUS $\quad \mathrm{pl}<\mathrm{GU}$, a Shetland violin
$\begin{array}{ll}\text { GUT } & n \text { the intestine a } v b \text { to take th } \\ \text { GUV } & n \text { short for governor }>\text { GUVS }\end{array}$
GUY $\quad n$ a person a $v b$ to make fun of $>$ GUYS, GUYING, GUYED
GYP $n$ pain, torture a $v b$ to swindle > GYPS, GYPPING, GYPPED
HAD vb to hold > HADS, HADDING, HAD, HADDEN
$n$ a Muslim pilgrimage to Mecca > HAJES
HAMMING, HAMMED
$n$ a monetary unit of Vietnam $>$ HAOS

[^21]adj chance > HAPLY a $v b$ to happen by chance > HAPS, HAPPING, HAPPED
$n$ 3rd person singular present form of HAVE, to possess
$n$ a covering for the head $a v b$ to provide with a hat > HATS, HATTING, HATTED
$n$ the fruit of the hawthorn $a v b$ to make indecisive noises > HAWS, HAWING, HAWED
$n$ grass, etc, cut down and dried for fodder $a v b$ to make hay > HAYS, HAYING, HAYED
$n$ a letter of the Hebrew alphabet > HEHS
$n$ an edge or border $a v b$ to form a hem on > HEMS, HEMMING, HEMMED
$n$ a female bird a $v b$ to challenge to a daring act > HENS, HENNING, HENNED
$n$ a rosehip > HEPS
pron a pronoun or possessive adjective representing a female person or thing
$p l<\mathrm{HE}$, a male person
$n$ short for heterosexual > HETS
$v b$ to cut with blows > HEWS, HEWING, HEWN, HEWED
$n$ a magical curse $a b$ to bring misfortune $>$ HEXES, HEXING, HEXED
int an interjection to attract attention a $n$ a winding country dance a $v b$ to dance a hey > HEYS, HEYING, HEYED
int an interjection representing a hiccup
$v b$ past tense of HIDE, to conceal
$v b$ to hurry along > HIES, HIEING or HYING, HIED
pron a pronoun representing a male person or thing > HIMS
$n$ a Hebrew liquid measure $>$ HINS
adj trendy > HIPPER, HIPPEST, HIPLY a $n$ the fleshy part of the thigh $a v b$ to carry on the hip > HIPS,
HIPPING, HIPPED or HIPT
adj of or belonging to a male person or thing
$n$ a blow; a success a $v b$ to strike $>$ HITS, HITTING, HIT
int an interjection expressing thoughtful consideration
int an interjection calling attention a $n$ cessation a $v b$ to stop > HOAS, HOAING, HOAED
$n$ a flat surface on which pots and pans are placed a $v b$ to furnish with hobnails > HOBS, HOBBING, HOBBED adj this
$n$ a V-shaped stemmed trough for carrying bricks or mortar on the shoulder a $v b$ to bob or jog > HODS,
HODDING, HODDED
$n$ a tool for loosening the earth $a v b$ to use a hoe > HOES, HOEING, HOED
$n$ a kind of pig a $v b$ to use selfishly > HOGS, HOGGING, HOGGED
int an interjection calling attention a $n$ cessation $a v b$ to stop $>$ HOHS, HOING, HOHED
int an interjection used to attract attention
$n$ a sacred plant of the ancient Persians $>$ HOMS
$n$ short for honey, as a term of endearment > HONS
int an interjection expressing boisterous emotion
$n$ a plant of the mulberry family, used to flavour beer a $v b$ to leap on one leg > HOPS, HOPPING, HOPPED
$p l<\mathrm{HO}$, an interjection calling attention etc; a disrespectful term for a woman
adj very warm > HOTTER, HOTTEST, HOTLY a vb to heat > HOTS, HOTTING, HOTTED
adv in what manner a $n$ a low hill > HOWS
$v b$ to hamstring > HOXES, HOXING, HOXED
$v b$ to incite > HOYS, HOYING, HOYED
$n$ the centre of a wheel > HUBS
$n$ a colour or tint > HUES, HUED
$n$ an embrace $a v b$ to embrace > HUGS, HUGGING, HUGGED
int an interjection expressing non-understanding
$n$ a Maori gathering > HUIS
$n$ a low murmur as of bees a $v b$ to make a humming sound $>$ HUMS, HUMMING, HUMMED
$n$ a barbarous and destructive person $>$ HUNS
int a call (to a horse) to go faster or to turn to the right a $v b$ to turn a horse to the right > HUPS, HUPPING, HUPPED
$n$ a small, mean or crudely built house $a v b$ to settle in a hut > HUTS, HUTTING, HUTTED
$v b$ to hasten > HYES, HYEING, HYED
$v b$ to offend $>$ HYPS, HYPPING, HYPPED
$n$ frozen water a $v b$ to cool with ice > ICES, ICING, ICED
$v b$ an old form of eke > ICHS or ICHES, ICHING, ICHED
int an interjection used to express disgust
adj covered with ice > ICIER, ICIEST, ICILY
$n$ a fish of the carp family > IDES

KAF $\quad n$ a letter of the Hebrew alphabet > KAFS
KAI $\quad n$ a New Zealand word for meal > KAIS
KAK $\quad n$ a S. African word for faeces, rubbish > KAKS
KAM adj a Shakespearean word for crooked, awry
KAS $\quad p l<K A$, the spirit or soul
KAT $\quad n$ a shrub of E. Africa, Arabia, etc, or its leaves, chewed or taken as tea for their stimulant effect $>$ KATS
$p l$ < ID, a fish of the carp family
conj 'If and only if' as used in logic
pl < IF, a condition
$v b$ to ignore, snub > IGGS, IGGING, IGGED
$n$ a type or kind $>$ ILKS
adj unwell > ILLER, ILLEST, ILLY a $n$ harm, misfortune > ILLS
$n$ a small devil a $v b$ to engraft (a hawk) with new feathers > IMPS, IMPING, IMPED
$n$ a meadow, especially one beside a river > INGS
$n$ a coloured liquid used in writing a $v b$ to colour with ink > INKS, INKED, INKING
$n$ a hostelry a $v b$ to put up at an inn > INNS, INNING, INNED
$v b 3^{\text {rd }}$ person singular of IN , to take in
$n$ an electrically-charged particle formed by loss or gain of electrons by an atom, effecting by its migration the
transport of electricity > IONS
$p l<1 \mathrm{O}$, a cry of 'io'
$n$ anger $a v b$ to anger $>$ IRES, IRING, IRED
$v b$ to annoy or weary > IRKS, IRKING, IRKED
$n$ in Scots law, issue or expiry > ISHES
$n$ any distinctive theory or fad > ISMS
$n$ short for isolated replay, a TV and film facility > ISOS
$n$ the miriti palm > ITAS
adj of or belonging to something
$n$ a climbing evergreen plant > IVIES, IVIED
$n$ a Maori word for tribe > IWIS
$n$ a prod, a poke $a v b$ to poke or stab $>$ JABS, JABBING, JABBED
$n$ a sharp projection a $v b$ to cut unevenly $>$ JAGS, JAGGING, JAGGED
int in India, victory (to)
$n$ an East Indian tree of the breadfruit family > JAKS
$n$ a conserve made with fruit and sugar a $v b$ to block up > JAMS, JAMMING, JAMMED
$v b$ to splash or spatter > JAPS, JAPPING, JAPPED
$n$ a wide-mouthed container a vb to put in jars; to give an unpleasant shock to > JARS, JARRING, JARRED
$n$ a mouth-structure for biting or chewing a $v b$ to chatter at length > JAWS, JAWING, JAWED
$n$ a bird of the crow family > JAYS
$v b$ of horses, to urge on > JEES, JEEING, JEED
$n$ a stream of liquid; a jetplane a $v b$ to travel by jetplane $>$ JETS, JETTING, JETTED
$n$ a French word for game > JEUX
$v b$ to haggle, get the better of $>$ JEWS, JEWING, JEWED
$n$ the boom of a crane or derrick a $v b$ to show objection > JIBS, JIBBING, JIBBED
$n$ a lively dance a $v b$ to dance a jig; to jump up and down > JIGS, JIGGING, JIGGED
$n$ one of a class of spirits in Muslim theology > JINS
$n$ a wig > JIZZES
$n$ a task, an employment a $v b$ to work at jobs > JOBS, JOBBING, JOBBED
$n$ a Scots word for loved one > JOES
$n$ a slight shake or push a $v b$ to run at a slow, steady pace > JOGS, JOGGING, JOGGED
$v b$ a S. African word for to have a good time > JOLS, JOLING, JOLED
$n$ the second movement of a raga $>J$ JORS
$n$ a little bit a $v b$ to note down > JOTS, JOTTING, JOTTED
$n$ a stroke of a bell $a v b$ to ring, toll a bell > JOWS, JOWING, JOWED
$n$ gladness a $v b$ to rejoice > JOYS, JOYING, JOYED
$n$ a mass of coal > JUDS
$n$ a pottery jar $a v b$ to stew in a jug > JUGS, JUGGING, JUGGED
$n$ a coin of N. Korea > JUN
$n$ a law or legal right > JURA
$v b$ to project > JUTS, JUTTING, JUTTED
$n$ an ancient Hebrew unit of measure $>$ KABS

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vb to caw > KAWS, KAWING, KAWED
$n$ the letter K > KAYS
$v b$ to give birth to a stillborn lamb > KEBS, KEBBING, KEBBED
$n$ a wingless fly that infests sheep > KEDS
KEF $\quad n$ a state of dreamy intoxication induced by eg cannabis > KEFS
KEG $\quad n$ a small cask a $v b$ to put in kegs $>$ KEGS, KEGGING, KEGGED
KEN $\quad n$ knowledge a $v b$ to know > KENS, KENNING, KENNED or KENT
KEP $v b$ a Scots word for catch > KEPS, KEPPING, KEPPED or KEPPIT, KEPPEN, KIPPEN
KET $n$ carrion, rotting flesh > KETS
KEX $\quad n$ the hollow stalk of an umbelliferous plant, such as the cow parsnip or the hemlock > KEXES
KEY $n$ an instrument for locking a $v b$ to enter (data) into a computer > KEYS, KEYING, KEYED
KHI $\quad n$ a letter of the Greek alphabet > KHIS
KID $\quad n$ a young goat; a child a $v b$ to hoax or deceive > KIDS, KIDDING, KIDDED
KIF $\quad n$ a state of dreamy intoxication induced by eg cannabis $>$ KIFS
KIN $n$ one's relations > KINS
KIP $n$ a nap a $v b$ to have a nap or sleep > KIPS, KIPPING, KIPPED
KIR $n$ a wine and blackcurrant drink > KIRS
KIS $\quad p l<K I$, the spirit of Japanese martial art
KIT $\quad n$ equipment $a v b$ to outfit, provide with equipment $>$ KITS, KITTING, KITTED
KOA $n$ a Hawaiian acacia > KOAS
KOB $\quad n$ an African waterbuck > KOBS
KOI $n$ a large Japanese carp > KOIS
KON $\quad v b$ an old word for know $>$ KONS, KONNING, KOND
KOP $\quad n$ a S. African word for hill > KOPS
KOR $\quad n$ a Hebrew unit of measure $>$ KORS
KOS $\quad n$ an Indian measure of distance $>$ KOSES
Kow $n$ a bunch of twigs $>$ KOWS
KUE $\quad n$ the letter $Q>$ KUES
KYE $n$ cows, cattle > KYE; a Korean-American commercial club > KYES
KYU $n$ a novice grade in judo $>$ KYUS
LAB $\quad n$ laboratory $>$ LABS
LAC $\quad n$ a dark-red resin > LACS
LAD $\quad n$ a boy or youth $>$ LADS
LAG $n$ a delay $a b$ to fall behind $>$ LAGS, LAGGING, LAGGED
LAH $\quad n$ a musical note $>$ LAHS
LAM $n$ escape or hurried flight, as in on the lam a $v b$ to beat > LAMS, LAMMING, LAMMED
LAP $\quad n$ a circuit of a race track $a v b$ to scoop up with the tongue $>$ LAPS, LAPPING, LAPPED
LAR $\quad n$ the god relating to a house $>$ LARES or LARS
LAS $p l<L A$, a musical note
LAT $n$ short for latrine > LATS; a Latvian unit of currency > LATI or LATU
LAV $\quad n$ lavatory > LAVS
LAW adj low > LAWER, LAWEST a $n$ a rule of action established by authority $a v b$ to take to court > LAWS, LAWING,
LAWED
adj slack, careless > LAXER, LAXEST, LAXLY a $n$ a kind of salmon > LAXES
$n$ a situation, a place for lying a vb to deposit, place horizontal > LAYS, LAYING, LAID or LAYED
$n$ a meadow or pasture > LEAS
$v b$ past tense of LEAD, to conduct
$n$ shelter $a v b$ a Scots word for to tell a lie > LEES, LEEING, LEED
$n$ a limb for walking and standing $a v b$ to walk briskly $>$ LEGS, LEGGING, LEGGED
$n$ a Hawaiian garland or wreath > LEIS
$n$ the standard monetary unit of Albania > LEKS, LEKE or LEKU; a piece of ground where blackcock gather and
display > LEKS a vb to perform such a display > LEKS, LEKKING, LEKKED
$v b$ a dialect form of leap > LEPS, LEPPING, LEPPED, LEPT
LES $\quad n$ short for lesbian > LESES
LET $n$ a hindrance; a letting for hire a vb to allow > LETS, LETTING, LET or (Scots) LOOT, (Scots) LITTEN,
LOOTEN, LUTTEN; to hinder > LETS, LETTING, LETTED
$n$ a unit of Romanian currency > LEU
$n$ a unit of Bulgarian currency > LEVA
$n$ a unit of Bulgarian currency > LEVA
$n$ law > LEXES or LEGES

LEY $\quad n$ a meadow or pasture > LEYS
LEZ $\quad n$ short for lesbian > LEZES or LEZZES
LIB $\quad v b$ to geld $>$ LIBS, LIBBING, LIBBED
LID $\quad n$ a cover, hinged or separate, for the opening and closing of a receptacle a $v b$ to provide with a lid > LIDS,
LIDDING, LIDDED
LIE $\quad n$ a false statement $a v b$ to tell a lie > LIES, LYING, LIED; to be in a horizontal position > LIES, LYING, LAIN, LAY
LIG $\quad v b$ to lie > LIGS, LIGGING, LIGGED
LIN $n$ a waterfall a $v b$ an old word for cease > LINS, LINNING, LINNED
LIP $\quad n$ either of the muscular flaps in front of the teeth $a v b$ to touch with the lips $>$ LIPS, LIPPING, LIPPED
LIS $\quad n$ a fleur-de-lis $>$ LIS or LISSES
LIT $\quad n$ a former monetary unit of Lithuania $>$ LITS
LOB $\quad v b$ to throw gently > LOBS, LOBBING, LOBBED
LOD $\quad n$ a statistic relating to the odds of an event > LODS
LOG $\quad n$ a fallen tree trunk $a v b$ to fell timber > LOGS, LOGGING, LOGGED
LOO $\quad n$ colloquial for lavatory $a v b$ to love > LOOS, LOOING, LOOED
LOP $\quad v b$ to cut off unnecessary parts > LOPS, LOPPING, LOPPED
LOR int for lord, an interjection expressing surprise
$n$ praise, reputation $>$ LOSES
$n$ a set of things a $v b$ to separate into lots > LOTS, LOTTING, LOTTED
$v b$ to love > LOUS, LOUING, LOUED
adj not high > LOWER, LOWEST, LOWLY $a n$ that which is low $a v b$ to make the noise of cattle > LOWS, LOWING, LOWED
$n$ liquid oxygen a $v b$ 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 $\quad n$ lord, used when addressing a judge > LUDS
$n$ an earlike projection or appendage a $v b$ to pull or drag with difficulty > LUGS, LUGGING, LUGGED
$n$ a chimney > LUMS
$n$ a Bronze Age trumpet > LURS
$n$ love, as a term of endearment > LUVS
$n$ a unit of illumination > LUXES or LUCES
$n$ a supposedly indestructible bone in the sacrum > LUZZES
$n$ a solution obtained by leaching $>$ LYES
$n$ a kind of bloodhound $>$ LYMS
MAA $\quad v b$ to bleat as a goat > MAAS, MAAING, MAAED
MAC $\quad n$ short for mackintosh $>$ MACS
MAD
adj insane > MADDER, MADDEST, MADLY a $v b$ to drive mad > MADS, MADDING, MADDED
adj more > MAES
$v b$ to tease; to steal > MAGS, MAGGING, MAGGED
$v b$ to make > MAKS, MAKING, MADE
$n$ a French word for pain, sickness > MALS
$n$ mother > MAMS
MAN $\quad n$ an adult human male $>$ MEN a $v b$ to provide with a (human) operator > MANS, MANNING, MANNED or (Spenser) MAND
$n$ a diagram of the surface of the earth, etc. a $v b$ to make a map of $>$ MAPS, MAPPING, MAPPED
$v b$ to spoil or damage > MARS, MARRING, MARRED or (Spenser) MARD
$n$ a house or home in the south of France $>$ MAS
$n$ a tangled mass, esp of hair a $v b$ to entangle $>$ MATS, MATTING, MATTED
$n$ the jaws or gullet of a voracious animal a $v b$ (US) to mow > MAWS, MAWING, MAWED, MAWN
$v b$ to reach the upper limit > MAXES, MAXING, MAXED
$n$ hawthorn blossom a $v b$ to gather may > MAYS, MAYING, MAYED
$n$ short for medical, medicine > MEDS
$n$ in Malaysia, noodles or a dish containing noodles $>$ MEES
$n$ an old word for halfpenny > MEGS
int mediocre or boring; an expression of indifference or boredom
$n$ honey > MELS
$n$ a letter of the Hebrew alphabet > MEMS
$p l<$ MAN, an adult human male
$p l<M E$, a musical note
$n$ short for meteorology > METS
$n$ the spignel plant $>$ MEUS

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MOD $\quad n$ one who wears boldly stylish clothes a vb to modify a machine or piece of software $>$ MODS, MODDING, MODDED
$n$ a wry face > MOES
$v b$ to move away > MOGS, MOGGING, MOGGED
pron a French word for me, facetiously used in English
$n$ a unit of molecular concentration > MOLS
$n$ mother > MOMS
$n$ a Japanese family badge or crest > MON
vb of cattle, to low > MOOS, MOOING, MOOED
$n$ a sponge, etc., on a stick a $v b$ to clean with a mop > MOPS, MOPPING, MOPPED
$n$ a layer of humus $>$ MORS
$p l<M O$, a moment
$n$ a French word meaning word $>$ MOTS
$n$ a Scots word for mouth > MOUS
$v b$ to cut the grass on > MOWS, MOWING, MOWN, MOWED
$n$ a Shakespearean word for coin or a measure $>$ MOYS
$n$ Australian slang for bad luck > MOZZES
$n$ wet soft earth a $v b$ to bury or hide in mud > MUDS, MUDDING, MUDDED
$n$ a cup with vertical sides $a v b$ to attack from behind > MUGS, MUGGING, MUGGED
adj silent a $n$ mother $a v b$ to act in a mime > MUMS, MUMMING, MUMMED
$n$ a dialect word for man $>$ MUNS
$p l<M U$, a letter of the Greek alphabet
$n$ a mongrel, a blockhead > MUTS
$v b$ to spoil, botch > MUXES, MUXING, MUXED
$n$ a cancer-causing gene $>$ MYCS
$v b$ to seize > NABS, NABBING, NABBED
adv a Scots word for no
$n$ a small horse; a querulous complaint $a v b$ to worry or annoy constantly > NAGS, NAGGING, NAGGED
int no
$n$ the action of taking another's goods by distraint > NAMS
$n$ a kind of slightly leavened Indian bread > NANS
$n$ a short sleep a $v b$ to take a short sleep > NAPS, NAPPING, NAPPED
$v b$ an old contraction of ne has, has not and ne was, was not
$n$ short for nationalist > NATS
int colloquial for no
int no a $n$ a denial > NAYS
$n$ a bird's bill $a v b$ to put a bill on > NEBS, NEBBING, NEBBED
$n$ a young hooligan > NEDS
adj of a woman, born with the name of
$n$ an elaborate table decoration in the shape of a ship for holding such things as table napkins and condiments > NEFS
$n$ a photographic negative $>$ NEGS
$n$ in S. Africa, a col, a pass in a mountain range > COLS
$n$ catmint, a plant attractive to cats $>$ NEPS
$n$ an open material, formed into meshes $a v b$ to catch (fish) in a net > NETS, NETTING, NETTED

OAR $\quad n$ a light pole with a blade at one end for propelling a boat a vb to row a boat > OARS, OARING, OARED

OWL $\quad n$ any member of the Strigiformes, nocturnal predacious birds a $v b$ to smuggle, especially wool or sheep from France > OWLS, OWLING, OWLED
adj belonging to oneself a pron what belongs to oneself a vb to possess > OWNS, OWNING, OWNED
$n$ a dialect word meaning anything > OWTS
adj of compounds, containing oxygen
adj of compounds, containing oxygen a $n$ a powerful analgesic drug, synthesized from thebaine > OXIES
$n$ a Scots word for grandchild $>$ OYES
pl < OY, a grandchild
$n$ a shoe patterned after a moccasin > PACS
$n$ anything stuffed with a soft material, to prevent friction, pressure, etc. (verb) to cover or fill with soft material >
PADS, PADDING, PADDED
$n$ a Maori hill fort > PAHS
$n$ a friend $a v b$ to associate as a pal > PALS, PALLING, PALLED
$n$ the knave of clubs > PAMS
$n$ a broad, shallow container $a b$ to wash earth for gold $>$ PANS, PANNING, PANNED
$n$ soft food for infants $a v b$ to feed soft pap food to infants > PAPS, PAPPING, PAPPED
$n$ a state of equality $a v b$ to score a standard number of strokes in golf $>$ PARS, PARRING, PARRED
$n$ a French word for step > PAS
adj hitting the mark precisely > PATLY a $n$ a light touch a $v b$ to stroke gently > PATS, PATTING, PATTED
$n$ short for pavlova, a type of dessert consisting of a meringue base topped with whipped cream > PAVS
$n$ a clawed foot a $v b$ to scrape with a paw > PAWS, PAWING, PAWED
$n$ peace, a truce $>$ PAXES
$n$ wages a vb to remunerate > PAYS, PAYING, PAID; to seal with tar > PAYS, PAYING, PAYED
$n$ a vegetable, the rounded seed of a climbing plant $>$ PEAS
$n$ a pectoral muscle $>$ PECS
$n$ short for pedestrian > PEDS
$n$ the letter $P$ a $v b$ to urinate $>$ PEES, PEEING, PEED

[^22]PEG $\quad n$ a pin or fixture a $v b$ to fasten with a peg > PEGS, PEGGING, PEGGED
PEH $\quad n$ a letter of the Hebrew alphabet $>$ PEHS
PEL $\quad n$ an earlier, now less common, word for a pixel > PELS
PEN $\quad n$ an implement for writing a $v b$ to write down on paper > PENS, PENNING, PENNED; to put in a pen
(enclosure) > PENS, PENNING, PENNED or PENT
PUTTEN, PITTEN, PAT
adv more
PIX $\quad n$ a box in which coins are kept for testing > PIXES
PLU $\quad n$ a beaver pelt > PLUS
PLY $\quad n$ a fold $a v b$ to bend or fold $>$ PLIES, PLYING, PLIED
POA $\quad n$ a meadow-grass plant $>$ POAS
POD $\quad n$ the fruit, or its shell, in peas, beans, and other leguminous plants $a v b$ to shell peas $>$ PODS, PODDING,
PODDED
int an interjection expressing contempt
$n$ a Hawaiian dish of fermented taro $>$ POIS
$n$ short for a politician > POLS
$n$ short for Pomeranian dog $>$ POMS
$n$ excrement a $v b$ to defecate $>$ POOS, POOING, POOED
$n$ a mild explosive sound; a genre of popular music a $v b$ to make a pop > POPS, POPPING, POPPED
adj short for positive
$n$ a utensil used for cooking or storing a $v b$ to cook or put in a pot >POTS, POTTING, POTTED
$n$ a Scots word for head > POWS
$n$ any of several virus diseases causing a rash of pustules a vb to infect with pox $>$ POXES, POXING, POXED
adj short for positive
prep before
$n$ short for professional, or prostitute $>$ PROS
$v b$ to enquire impertinently into > PRIES, PRYING, PRIED
$n$ a letter of the Greek alphabet $>$ PSIS
int an interjection used to attract attention
$n$ a public house a $v b$ to visit a pub $>$ PUBS, PUBBING, PUBBED
$n$ pudding > PUDS
$n$ clay, ground and worked with water a $v b$ to fill in with clay or mortar > PUGS, PUGGING, PUGGED
int an interjection expressing disgust
$n$ a coin of Afghanistan > PULS or PULI
$n$ a play on words a $v b$ to make a pun $>$ PUNS, PUNNING, PUNNED
$n$ a young dog a $v b$ to give birth to puppies > PUPS, PUPPING, PUPPED
$v b$ to make a sound like a cat > PURS, PURRING, PURRED
$n$ a thick yellowish bodily fluid associated with infection $>$ PUSES, PUSSY
vb to place; to throw > PUTS, PUTTING, PUT
$n$ a small volcanic cone > PUYS
$n$ a copper coin of Burma > PYAS
$v b$ to reduce to confusion > PYES, PYEING, PIED
$n$ a box at the Mint in which sample coins are kept for testing a $v b$ to test a coin > PYXES, PYXING, PYXED

REF $\quad n$ short for referee $a v b$ to referee $>$ REFS, REFFING, REFFED
REG $\quad n$ short for registration (number) $>$ REGS

ROK $\quad n$ an enormous bird of Arabian legend $>$ ROKS
ROM $\quad n$ a gypsy man $>$ ROMA or ROMS
ROO $n$ shot for kangaroo $>$ ROOS
ROT $\quad n$ decay; nonsense a $v b$ to decay $>$ ROTS, ROTTING, ROTTED

ROW $\quad n$ a noise; an argument a $v b$ to quarrel; to propel through water with oars > ROWS, ROWING, ROWED
RUB $\quad n$ the act of rubbing; a hitch a $v b$ to apply friction > RUBS, RUBBING, RUBBED; a Scots word for rob $>$ RUBS, RUBBING, RUBBET, RUBBIT
RUC $\quad n$ an enormous bird of Arabian legend $>$ RUCS
RUD $\quad n$ an old word meaning redness of complexion a $v b$ a Spenserian word meaning to redden > RUDS, RUDDING, RUDDED
RUE $\quad n$ repentance, regret $a v b$ to regret $>$ RUES, RUING or RUEING, RUED
RUG $\quad n$ a heavy floor-mat a $v b$ a Scots word meaning to pull roughly > RUGS, RUGGING, RUGGED
RUM adj odd, droll > RUMMER, RUMMEST, RUMLY a $n$ a spirit distilled from sugar-cane > RUMS
$n$ a gait faster than a walk a $v b$ to move quickly; to organise and/or control > RUNS, RUNNING, RUN, RAN
$n$ a furrow made by a wheel $a v b$ to make a furrow with a wheel > RUTS, RUTTING, RUTTED
RYA $\quad n$ a type of Scandinavian rug > RYAS
RYE $\quad n$ a cereal grass; its grain > RYES
$n$ a saboteur $a v b$ to act as a saboteur; also, a Scots word for sob > SABS, SABBING, SABBED
$n$ in biology, a bag-like structure > SACS
adj unhappy, sorrowful > SADDER, SADDEST, SADLY a vb to express sadness > SADS, SADDING, SADDED adv a Scots word for so
$n$ a downward hang a $v b$ to bend or hang down > SAGS, SAGGING, SAGGED
$n$ the capuchin monkey > SAIS
$n$ a large N. Indian tree > SALS
adv together a $v b$ to gather > SAMS, SAMMING, SAMMED
$n$ a discarded letter of the Greek alphabet > SANS
$n$ a liquid circulating through plants $a v b$ to drain > SAPS, SAPPING, SAPPED
$v b$ a Scots word for savour > SARS, SARING, SARED
$v b$ past tense of SIT, to rest on the buttocks
$n$ a Vietnamese monetary unit > SAU
$n$ short for saveloy, a highly seasoned sausage > SAVS
$n$ a cutting tool with a toothed blade a $v b$ to cut with a saw > SAWS, SAWING, SAWN, SAWED
$n$ 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
$n$ a stringed instrument of $N$. Africa > SAZES or SAZZES
SAZ
SEA $\quad n$ a great expanse of water $>$ SEAS
SEC $\quad n$ short for second, a unit of time measurement > SECS
SED $\quad v b$ an old form of said
SEE $\quad v b$ to perceive by the eye $>$ SEES, SEEING, SEEN, SAW
SEG $\quad n$ a stud in the sole of a shoe $>$ SEGS
SEI $\quad n$ a kind of rorqual whale $>$ SEIS
SEL $n$ self $>$ SELS
SEN $\quad n$ a Japanese monetary unit $>$ SEN
SER $\quad n$ a unit of weight in India $>$ SERS
SET $\quad v b$ to put or place in position > SETS, SETTING, SET
$v b$ to work on with a needle and thread > SEWS, SEWING, SEWN, SEWED
$n$ the quality of being male or female a $v b$ to identify the sex of $>$ SEXES, SEXING, SEXED
$n$ a part of a carcase of beef $>$ SEYS
$v b$ colloquial $3^{\text {rd }}$ person singular of SAY
int an interjection requesting silence
pron a pronoun used in referring to female person or thing $>$ SHES
int an interjection requesting silence
adj embarrassed, bashful > SHIER or SHYER, SHIEST or SHYEST, SHILY or SHYLY a $n$ a sudden swerving aside a $v b$ to jump aside, recoil > SHIES, SHYING, SHIED
$n$ a blood relation, a kinsman > SIBS
$a d v$ literally $a v b$ to incite a dog to attack > SICS, SICCING or SICKING, SICCED or SICKED
adj syphilitic, nasty
adj an Australian slang word for excellent
$n$ short for simulation or for Simeonite, an evangelical follower of Charles Simeon > SIMS
$n$ a moral offence a $v b$ to commit $\sin >$ SINS, SINNING, SINNED
$n$ a small mouthful of liquid $a v b$ to drink in small mouthfuls $>$ SIPS, SIPPING, SIPPED
$n$ a title of respect a $v b$ to address as "sir" > SIRS, SIRRING, SIRRED
$n$ short for sister > SISES
$v b$ to rest on the buttocks > SITS, SITTING, SAT or (obs.) SATE, SITTEN
SOBBED
$n$ the right of holding a local court > SOCS
$n$ a piece of turf $a v b$ to cover with sods of turf > SODS, SODDING, SODDED
$n$ a wet place $a v b$ to soak $>$ SOGS, SOGGING, SOGGED
$n$ a musical note $>$ SOHS
$n$ a musical note $>$ SOLS
$n$ the standard monetary unit of Kyrgyzstan > SOMS or SOMY
$n$ a male offspring > SONS
$n$ bread or other food dipped or soaked in liquid a $v b$ to soak > SOPS, SOPPING, SOPPED
$p l<S O$, a musical note
$n$ a habitual drunkard $a v b$ to play the sot > SOTS, SOTTING, SOTTED
$n$ an old small French coin > SOUS
$n$ sovereign, a gold coin $>$ SOVS
$n$ a female pig a $v b$ to scatter seed on the ground > SOWS, SOWING, SOWED, SOWN
pl socks
$n$ a dark, salty sauce made from fermented beans > SOYS
int sorry
$n$ a resort with a mineral spring a $v b$ to stay at a spa $>$ SPAS, SPAING, SPAED
$n$ a secret agent employed to watch $a v b$ to watch secretly > SPIES, SPYING, SPIED or (obs.) SPIDE
$n$ in India, a title of great respect given to a man > SRIS
$n$ a home for a pig a $v b$ to keep in a sty > STIES or STYES, STYING, STIED or STYED
$n$ short for submarine, subscription, substitution $a v b$ to subscribe, substitute etc > SUBS, SUBBING, SUBBED
$n$ a rare singular form of suds, a froth of soapy water > SUDS
$v b$ to prosecute at law > SUES, SUING, SUED
$v b$ to attempt to sell a product while purporting to be engaged in market research > SUGS, SUGGED,
SUGGING
pron of himself, itself
$n$ an Arab market place > SUKS
$n$ the total, whole amount $a v b$ to add, make up the total of > SUMS, SUMMING, SUMMED
$n$ the star that is the source of light $a v b$ to expose to the sun's rays > SUNS, SUNNING, SUNNED
$n$ a small mouthful $a v b$ to take liquid into the mouth > SUPS, SUPPING, SUPPED
$n$ an Arab market place > SUQS
prep a French word meaning on, above
$n$ a suspect > SUSES a vb to arrest for suspicious behaviour > SUSSES, SUSSING, SUSSED
$n$ the Australian game of two-up > SWIES
$v b$ to strain > SYES, SYEING, SYED
prep since
$n$ a small tag or flap a $v b$ to affix a tab to $>$ TABS, TABBING, TABBED
$n$ a small amount > TADS
$n$ a Scots word for toe $a v b$ to toe $>$ TAES, TAEING, TAED
$n$ a tab or label $a v b$ to put a tag on > TAGS, TAGGING, TAGGED
$n$ a Japanese sea bream > TAIS
$n$ a crown, a Dervish's tall conical cap > TAJES
$v b$ a Scots form of take > TAKS, TAKING, TAKEN, TOOK
$n$ a cap with a broad, circular flat top > TAMS
adj brown $>$ TANNER, TANNEST a $n$ a brown colour from sunbathing $a v b$ to become brown in the sun $>$ TANS,
TANNING, TANNED
$n$ a path of virtuous conduct in Chinese philosophy > TAOS
$n$ a gentle knock or its sound $a v b$ to knock gently > TAPS, TAPPING, TAPPED
$n$ a black bituminous substance $a v b$ to coat with tar $>$ TARS, TARRING, TARRED
$p l<T A$, a thank-you
$n$ odds and ends of little real value $a v b$ to touch up > TATS, TATTING, TATTED
$n$ a letter of the Greek alphabet > TAUS

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$n$ a letter of the Hebrew alphabet > TAVS
$v b$ to prepare skins for white leather > TAWS, TAWING, TAWED
$n$ a contribution levied towards a country's revenue $a v b$ to impose a tax on > TAXES, TAXING, TAXED $n$ a dialect word for tea > TAYS
$n$ a beverage; an afternoon meal or light refreshment at which tea is generally served $a v b$ to take tea $>$ TEAS, TEAING, TEAED
$n$ a detective > TECS
$v b$ to spread out grass for drying > TEDS, TEDDING, TEDDED
$n$ a small plastic or wooden support for a golf ball $a v b$ to place a golf ball on a tee > TEES, TEEING, TEED
$n$ an Ethiopian cereal grass > TEFS
$n$ a sheep in its second year > TEGS
$n$ in Arab lands, a hill or ancient mound formed from the accumulated debris from earlier mud or wattle
habitations > TELS
$n$ the next whole number after nine > TENS a adj of the number ten
$p l<T E$, a musical note
$n$ a letter of the Hebrew alphabet > TETS
$v b$ to hustle > TEWS, TEWING, TEWED
$n$ a unit of weight used to measure the density of yarn > TEXES
adj the definite article
adj a Spenserian form of hose
adj of thee
$n$ an involuntary twitching of muscles a $v b$ to twitch > TICS, TICCING, TICCED
$n$ a mood $>$ TIDS
$v b$ to fasten > TIES, TIEING or TYING, TIED or (Spenser) TYDE
$n$ a touch, a game of 'it' a $v b$ to touch > TIGS, TIGGING, TIGGED
$n$ the drug methamphetamine in crystal form $>$ TIKS
$n$ the sesame plant > TILS
$n$ a metallic element > a $v b$ to coat with tin > TINS, TINNING, TINNED
$n$ a gratuity; a helpful piece of advice a $v b$ to give a tip > TIPS, TIPPING, TIPPED or (obs.) TIPT
$p l<\mathrm{TI}$, a small Pacific tree with sword-shaped leaves
$n$ any of various kinds of small songbirds of the family Paridae a $v b$ to tug $>$ TITS, TITTING, TITTED pl tickets
$n$ telecommunications code for the letter T > TOCS
$n$ a weight used in the wool trade, usually 28 pounds or 2 stone $a v b$ to yield a tod > TODS, TODDING, TODDED
$n$ a digit on the end of a foot $a v b$ to kick or touch with the toes $>$ TOES, TOEING, TOED
$n$ a garment, an item of clothing $a v b$ to dress $>$ TOGS, TOGGING, TOGGED
$n$ a male cat a $v b$ to engage in prostitution $>$ TOMS, TOMMING, TOMMED
$n$ a unit of weight equivalent ot twenty hundredweight > TONS
$a d v$ as well, in addition; to a greater extent than is required
$n$ the highest point a $v b$ to cover the top; to surpass > TOPS, TOPPING, TOPPED
$n$ a hill, a rocky height > TORS
$n$ a small child or drink $a v b$ to add or total > TOTS, TOTTING, TOTTED
$n$ fibres of flax, jute or hemp a $v b$ to pull along (behind) > TOWS, TOWING, TOWED
$n$ an object for playing with $a v b$ to play idly with > TOYS, TOYING, TOYED
$n$ an attempt $\propto$ adj choice, purified $\propto v b$ to attempt; to make an effort > TRIES, TRYING, TRIED or (obs.) TRIDE int to utter such an exclamation of annoyance > TSKS, TSKING, TSKED
$n$ an open container, orig of wooden staves and hoops $a v b$ to bathe in a tub > TUBS, TUBBING, TUBBED
$n$ a forcible or jerking pull $a v b$ to pull forcibly > TUGS, TUGGING, TUGGED
$n$ a New Zealand bird, a honey guide $>$ TUIS
$n$ the stomach > TUMS
$n$ a large cask a $v b$ to put in a tun > TUNS, TUNNING, TUNNED
$v b$ of a ram, to copulate $>$ TUPS, TUPPING, TUPPED
int an exclamation of rebuke a $v b$ to say tut > TUTS, TUTTING, TUTTED
$n$ tuxedo, a dinner jacket > TUXES
adj a Scots form of two > TWAS
$n$ the next whole number after one > TWOS a adj of the number two adj dim-witted or stupid
$n$ an inclined trough for washing ore a $v b$ to wash in a tye trough > TYES, TYEING, TYED $n$ an old drinking-cup with two or more handles > TYGS
$n$ a Japanese species of aralia > UDOS

UTU $n$ a Maori settlement of
UVA $\quad n$ a grape or grape-like berry $>$ UVAE or UVAS
VAC $\quad n$ a vacation $a v b$ to clean with a vacuum cleaner $>$ VACS, VACKING, VACKED
VAE $\quad n$ in Orkney or Shetland, a bay or creek $>$ VAES
VAG $\quad v b$ to arrest someone for vagrancy > VAGS, VAGGING, VAGGED
VAN $\quad n$ a light vehicle used in transporting goods a $v b$ to go or send in a van > VANS, VANNING, VANNED
VAR $\quad n$ a unit of reactive power $>$ VARS
VAS $\quad n$ a duct carrying liquid $>$ VASA
VAT $\quad n$ a large vessel or tank $a v b$ to put or treat in a vat > VATS, VATTING, VATTED
VAU $\quad n$ an obsolete letter in the Greek alphabet > VAUS
VAV $\quad n$ a letter of the Hebrew alphabet > VAVS
VAW $\quad n$ a letter of the Hebrew alphabet > VAWS
VEE $\quad n$ the letter $V>$ VEES
VEG $\quad n$ short for vegetable $>$ VEGES a vb to laze about, to engage in mindless activity $>$ VEGGES, VEGGED, VEGGING
VET $\quad n$ an animal doctor $a v b$ to examine closely $>$ VETS, VETTING, VETTED
VEX $\quad v b$ to distress or annoy $>$ VEXES, VEXING, VEXED or (obs.) VEXT
VIA adv by way of a $n$ a road $>$ VIAE or VIAS
VID $\quad n$ a short form of video $>$ VIDS
$v b$ to contend in rivalry > VIES, VYING, VIED
$n$ short for vigorish, a charge paid to a bookie on a bet > VIGS
VIM $\quad n$ energy, vigour $>$ VIMS
VIN $n$ wine $>$ VINS
VIS $\quad n$ force $>$ VIRES
VLY $\quad n$ low-lying ground where a shallow lake forms in the wet season > VLIES
VOE $\quad n$ in Orkney or Shetland, a bay or creek > VOES
VOL $\quad n$ in heraldry, two wings displayed and conjoined $>$ VOLS
VOR $\quad v b$ to warn > VORS, VORRING, VORRED
VOW $\quad n$ a solemn promise a $v b$ to make a vow or vows $>$ VOWS, VOWING, VOWED
$n$ a voice $>$ VOCES
$n$ a small unfilled cavity in a lode or in rock $>$ VUGS
vb to vow > VUMS, VUMMING, VUMMED
WAB $\quad n$ an old form of web $>$ WABS
WAD $\quad n$ a pad of loose material used for packing a $v b$ to form into a wad $>$ WADS, WADDING, WADDED
WAE $\quad n$ a Scots form of woe $>$ WAES
WAG $\quad n$ a sideways movement; a droll person $a v b$ to move from side to side $>$ WAGS, WAGGING, WAGGED
$n$ a Maori word for water > WAIS
adj pale > WANNER, WANNEST, WANLY a $v b$ to make or become wan > WANS, WANNING, WANNED $v b$ to throw or pull quickly > WAPS, WAPPING, WAPPED
$n$ a state of conflict $a v b$ to make war > WARS, WARRING, WARRED a adj an old form of worse $>$ WARST, WAURST
$v b$ a past tense of BE, to exist
$n$ a Thai Buddhist temple or monastery > WATS
$n$ an old word for wave > WAWS
$n$ a fatty substance $a v b$ to treat with wax; to grow larger > WAXES, WAXING, WAXED or (obs.) WOX or WOXEN
$n$ a route a $v b$ (Spenser) to weigh, esteem > WAYS, WAYING, WAYED
$n$ a fine structure spun by a spider $a b$ to envelop with a web $>$ WEBS, WEBBING, WEBBED
$v b$ to marry > WEDS, WEDDING, WEDDED
adj small $>$ WEER, WEEST a $n$ urine a $v b$ to urinate $>$ WEES, WEEING, WEED
$n$ the womb or belly > WEMS
$n$ a sebaceous cyst $>$ WENS
adj not dry > WETTER, WETTEST, WETLY a $v b$ to make wet > WETS, WETTING, WETTED
$v b$ to wax, grow > WEXES, WEXING, WEXED
$n$ a measure for dry goods $>$ WEYS
pron a Scots form of who
pron a pronoun used in referring to a person or people
adv for what cause or reason a $n$ the reason or cause of something $>$ WHYS
$n$ an artificial covering of hair for the head $a v b$ to scold; to provide with a wig > WIGS, WIGGING, WIGGED
$v b$ to gain > WINS, WINNING, WON; to winnow > WINS, WINNING, WINNED
$v b$ a sham archaic word for to know
$n$ intelligence; humour a $v b$ to know > WITS, WITTING, WITTED
$n$ a very skilful person > WIZES or WIZZES
$n$ misery > WOES
$n$ Australian slang for fool, idiot $>$ WOFS
$n$ a nonwhite foreigner $>$ WOGS
$n$ a pan used in Chinese cookery > WOKS
$v b$ to dwell > WONS, WONNING, WONNED or WONT
$v b$ to court; to seek the support of > WOOS, WOOING, WOOED
$n$ an offensive word for a member of a Mediterranean or Latin race, eg an Italian a $v b$ to thump $>$ WOPS, WOPPING, WOPPED
pl < WO, woe
$v b$ an old word for know > WOTS, WOTTEST, WOTTETH, WOTTING, WOTTED
int an exclamation of wonder a $n$ a success $a v b$ to impress > WOWS, WOWING, WOWED
$v b$ an old past tense of WAX, to grow
adj twisted > WRIER or WRYER, WRIEST or WRYEST a vb to give a twist to > WRIES, WRYING, WRIED
$n$ wood a $v b$ to load with wood $>$ WUDS, WUDDING, WUDDED
$n$ a Welsh term used for addressing a companion $>$ WUSES
$n$ the letter $Y$; a $Y$-shaped pipe > WYES
$n$ a rune, having the value of modern English W > WYNS
pl < XI, a Greek letter
$n$ a hand-held pointer used for reading the Torah > YADS
adj a Scots word meaing one, very or same
$n$ a type of synthetic garnet containing yttrium and aluminium, used in lasers and as a gem > YAGS
adv a variant of yea, an affirmative vote a $n$ an affected upper-class person > YAHS
$n$ a species of ox found in Tibet $a v b$ to talk persistently > YAKS, YAKKING, YAKKED
$n$ a sweet potato > YAMS
$n$ a sharp bark $n v$ to bark sharply or constantly $>$ YAPS, YAPPING, YAPPED
adj an old word meaning nimble > YARER, YAREST
$v b$ of eg a plane, to move from right to left in a horizontal plane > YAWS, YAWING, YAWED
int an exclamation of joy, approbation, encouragement etc a $n$ an affirmative vote $>$ YAYS
adv yes a $n$ an affirmative vote > YEAS
int yes
$n$ a Japanese unit of currency $a v b$ to desire or yearn > YENS, YENNING, YENNED int yes > YEPS
$n$ an affirmative reply > YESES or YESSES a $v b$ to give an affirmative reply to > YESSES, YESSING, YESSED adv in addition, besides; nevertheless

YEW $\quad n$ a type of evergreen tree > YEWS
YEX $\quad v b$ to hiccup or belch > YEXES, YEXING, YEXED
YGO $\quad v b$ a Spenserian past tense of GO, to pass from one place to another
YID $\quad n$ an offensive term for a Jew > YIDS
YIN $n$ a Scots word for one $>$ YINS
YIP $\quad v b$ to give a short, sudden cry > YIPS, YIPPING, YIPPED
YOB $n$ a lout $>$ YOBS
YOD $\quad n$ a Hebrew letter > YODS
YOK $\quad v b$ to laugh > YOKS, YOKKING, YOKKED
YOM $\quad n$ a Jewish day, esp in a religious context > YOMIM
YON adj that, those a adv yonder a pron that one
YOU pron pronoun referring to the person being addressed > YOUS
YOW $\quad v b$ to yowl, howl > YOWS, YOWING, YOWED
YUG $\quad n$ one of the four Hindu ages of the world > YUGS
YUK $\quad v b$ an unpleasant mess $a v b$ to itch > YUKS, YUKKING, YUKKED
YUM int an interjection expressing satisfaction
YUP int yes > YUPS
YUS $\quad p l<Y U$, a kind of jade
ZAG $\quad n$ a new line, or sharp change, of direction on a zigzag course $\alpha v b$ to change direction on a zig-zag course > ZAGS, ZAGGING, ZAGGED
ZAP $\quad v b$ to destroy $>$ ZAPS, ZAPPING, ZAPPED
ZAS $\quad$ pl<ZA, pizza
ZAX $\quad n$ a chopper for trimming slate $>$ ZAXES
ZEA $\quad n$ part of a cereal, once used as a diuretic $>$ ZEAS
ZED $\quad n$ the letter $Z>$ ZEDS
ZEE $\quad n$ in the US, the letter $Z>$ ZEES
ZEK $\quad n$ an inmate of a labour camp in the former USSR > ZEKS
ZEL $\quad n$ an oriental cymbal > ZELS
ZEP $\quad n$ a long sandwich > ZEPS
ZEX $n$ a chopper for trimming slate $>$ ZEXES
ZHO $\quad n$ a cross between a yak and a cow $>$ ZHOS
ZIG $n$ a new line or sharp change of direction on a zigzag course $a v b$ to change direction on a zig-zag course > ZIGS, ZIGGING, ZIGGED
ZIN $\quad n$ zinfandel, a kind of grape $>$ ZINS
ZIP $n$ a kind of fastener; energy a $v b$ to fasten with a zip > ZIPS, ZIPPING, ZIPPED
ZIT $n$ a pimple $>$ ZITS
ZIZ $n$ a nap or sleep a $v b$ to take a nap > ZIZZES, ZIZZING, ZIZZED
ZOA pl<ZOON, a unified individual creature
ZOL $\quad n$ S. African slang for a cannabis cigarette > ZOLS
ZOO $\quad n$ a garden or park where animals are kept > ZOOS
ZOS $\quad \mathrm{pl}<\mathrm{ZO}$, a cross beween a yak and a cow
ZUZ $\quad n$ an ancient Palestinian coin > ZUZIM or ZUZZIM
zZZ int an interjection expressing sleep


[^0]:    Craig Beevers, Theresa Bennett, Robyn Bowie, Anand Buddhdev, Amy Byrne, John Chew, Bridget Dunbar, Kate Fukawa-Connelly, Oliver Garner, Barry Grossman, Sarah-Jane Holden, Nicky Huitson, Rik 'Koftgari' Kennedy, Kitty-Jean Laginha, Chris May, Wendy Pittman, David Sutton, Michael Thelen, John Van Pelt, Mike Whiteoak.

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[^1]:    "Lasciate ogni speranza, voi ch'entrate!"

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