

Why should you  
implement

**WONDER WORDS**  
as a whole-school solution?

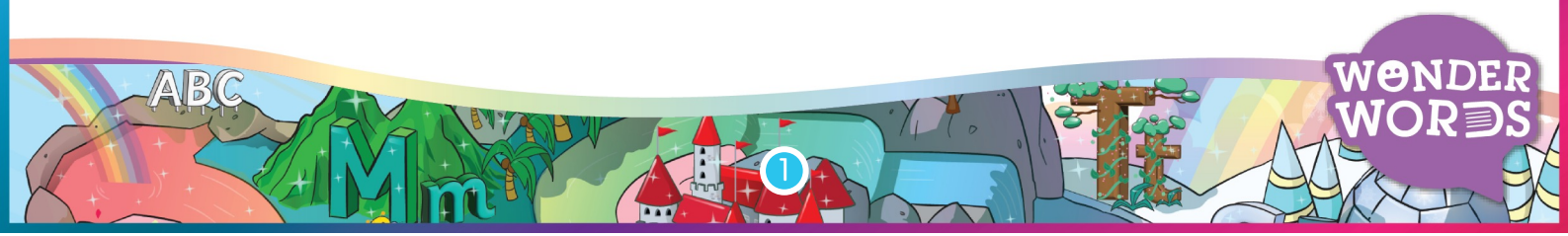


# Why should you implement Wonder Words as a whole-school solution?

Many schools and national curriculums are making a shift toward synthetic phonics, but why is that? Based on *The Science of Reading* (a culmination of major research from experts in the field), we now recognise the scientific processes behind children learning to read. As a result, many deficits in traditional teaching methods have been highlighted. This has brought about a critical time of reflection for both schools and teachers as they reflect on their current practices. Coupled with this time of reflection, is an exciting time of opportunity, to welcome new research-aligned practices. Wonder Words is proud to deliver a program that is accessible, systematic and aligned to The Science of Reading.

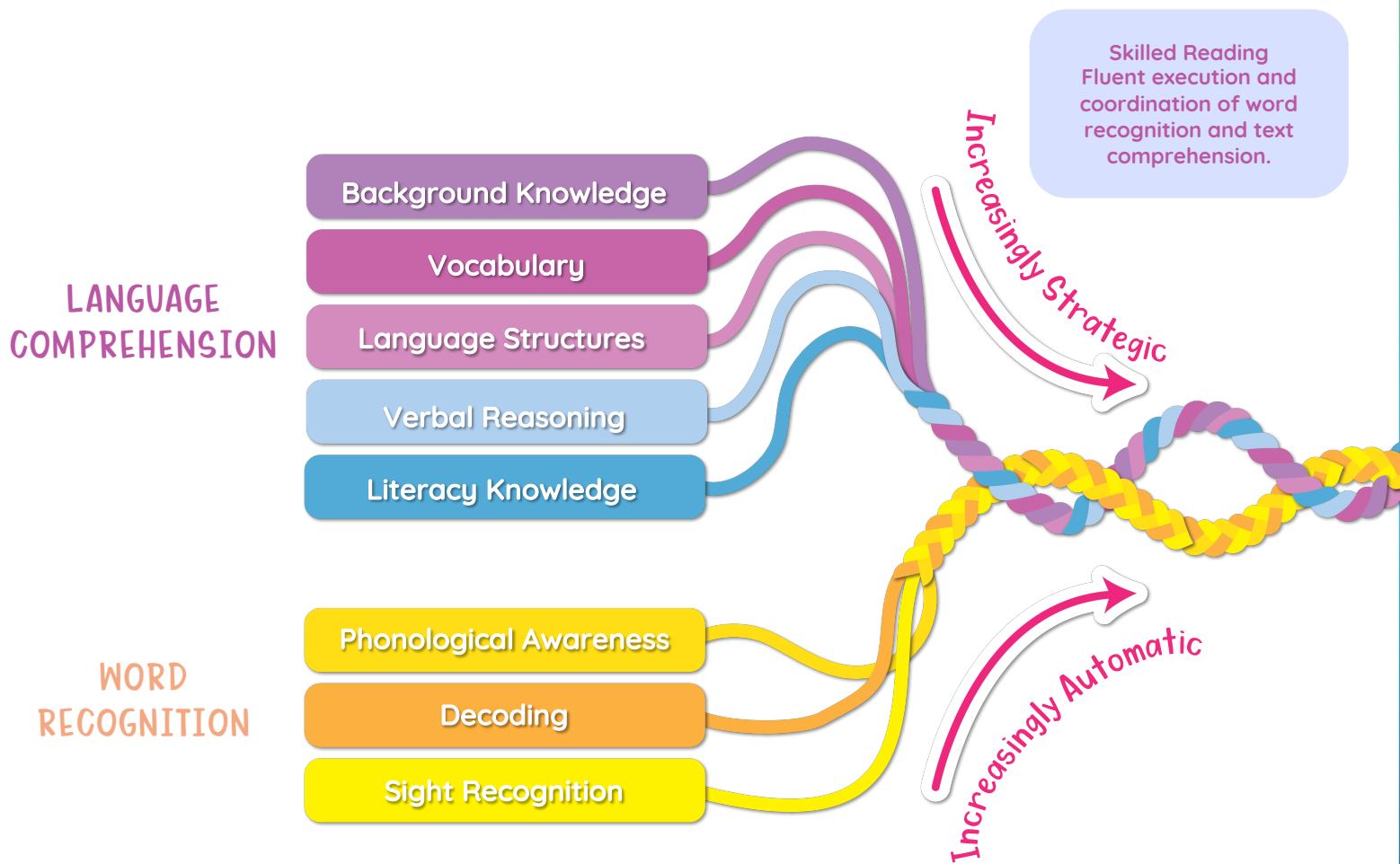
Students and teachers who will embark on their Wonder Words journey will see fast results, with students reading within the first week of the program. The program couples synthetic phonics with the explicit teaching of high frequency words to deliver results in all schools and their varying contexts.

Before delving into the unique makeup of the program, it is important to understand the **research** that this program is built upon, to help you make an informed and considered decision. There is overwhelming research evidence that demonstrates reading needs to be taught in an **explicit, systematic and cumulative manner**. These findings are in direct contrast to the ideas of whole language teaching and learning. Whole language theory believes that reading is acquired as naturally as speaking, and that children will learn to read simply through the immersion of literature. In contrast, John White (2002) states that children “need deliberate induction and correction, for left to their own devices learners would never pick up sophisticated associations required to become proficient readers and writers”. Leading research is telling us that our students need to be taught synthetic phonics in an explicit and systematic manner, and that is what makes up the foundation of our Wonder Words program.





Below, is an illustration of Scarborough's Reading Rope. The metaphor depicts skilled reading as a rope consisting of many strands. The strands originate from language comprehension or word recognition, and these two primary strands slowly entwine to create skilled readers.



## Scarborough's Reading Rope

Scarborough, H. (2001). Connecting early language and literacy to later reading (dis)abilities: Evidence, theory, and practice. Pp. 97-110 in S. B. Neuman & D. K. Dickinson (Eds.) *Handbook of Early Literacy*. NY: Guilford Press.

During the beginning phases of a student's reading journey, the lower strand of word recognition is of utmost importance as it heavily affects the comprehension of a text. Without the skillset to quickly decode words, and recognise words by sight, meaning of the text is lost. We do read after all, to understand and comprehend what we read.

Wonder Words was specifically developed to target these key strands. Each strand is unpacked and given equal time and attention to create skilled and fluent readers.



Before we delve into **how** to effectively teach reading, it is important first and foremost to understand why students struggle to read. In order to answer that question, we will dissect and discuss current successes of **whole word language** and **analytical phonics**. While whole language approaches are still very common in many classrooms, it is rare to find a reading program that is strictly whole language. Many whole language programs also use embedded analytical phonics, widely referred to as **‘Balanced Literacy’**. What makes Wonder Words so special is our use of synthetic phonics. Below is a summarised table of the key differences between the two different phonics approaches.

Analytical Phonics	Synthetic Phonics
Focuses on the 26 letters of the alphabet and their corresponding sounds. A full range of their graphemes that represent those sounds may not be covered.	A systematic approach which focuses on the 44 phonemes of spoken English. Graphemes are taught systematically and cumulatively.
Focus is on initial and final sounds in words, and spelling patterns, without segmenting each individual sound.	Focuses on the segmentation of each individual phoneme in words.
Spelling is taught separately from reading with a heavy focus on spelling rules.	Word reading and spelling are taught simultaneously and focuses on the skills of blending and segmenting.
Sounds are taught with picture clues and mnemonic chants.	Learning is focused on the linking of sounds to their symbols/spellings, blending, and segmenting
Letter-sounds are taught in isolation.	Sounds are taught in contexts of words.
Progression is generally slower, sometimes teaching one sound per week. This unnecessarily delays reading progress.	A select few sounds are taught in context at the same time. Students are reading within the first few lessons.
Contain one or more of the following misleading explanations/teaching methods: <ul style="list-style-type: none"> <li>- silent letters</li> <li>- ‘Magic e’ ... what about words such as gone, engine, imagine?</li> <li>- consonant blends</li> <li>- heavy focus on letter names early on in the phoneme-grapheme mapping phase</li> </ul>	Systematically teaches the key conceptual knowledge and skills that students need to know and understand to effectively read and write.  Students are taught that the alphabetic code is reversible and that if they can read, they can write.

From this comparison, it is clear why national curriculums and schools are transitioning from balanced literacy to synthetic phonics.



Without proper decoding strategies, students are left with strategies such as ‘skipping over words’, ‘looking at picture clues’ and ‘guessing’ in a curriculum that grows in complexity each year. These strategies undermine a student’s ability to decode words which are easily read with alphabetic code knowledge (e.g. *went .../w/e/n/t/*). It is important to note, that once a new word has been decoded numerous times, familiarity will begin to speed up the process until it is *just* as fast as whole-word memorisation.

### Word Frequencies

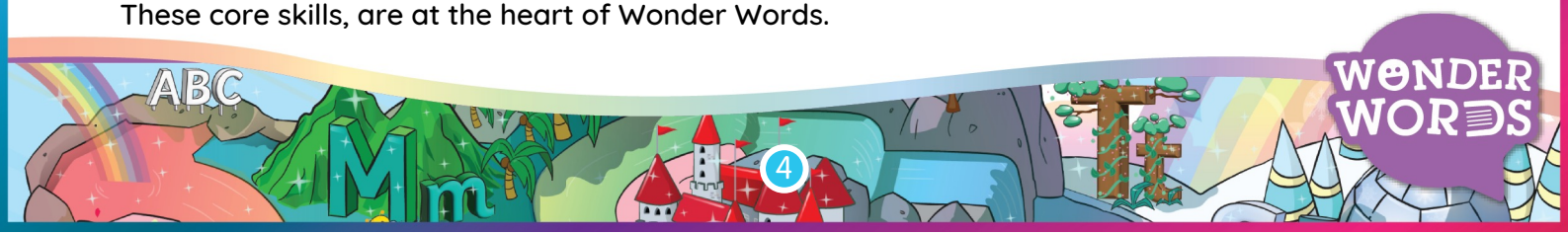
In a US study conducted by Carrol et al. (1971) on the word frequencies encountered by children in a typical Year 3 classroom, it was found that in samples ranging from picture books, text books and reference books:

- \* 50% of a 100 word text consists of high frequency words
- \* 75% of an 800 word text consists of high frequency words
- \* 90% of a 2500 word text consists of high frequency words

While these percentages of high frequency words are high, **the total number of different words used was actually 23,477** (Carroll et al, 1971). This leaves around 21,000 not-so-frequently-encountered words for students to decode, who have predominantly learned to read through whole-word memorisation. We all know how overloaded our school days are, there are simply not enough hours to have students learn these words through look-and-say techniques. It is important to note, that as children progress through school, the number of not-so-frequent words encountered will continue to increase (there are 63,000 more words between Year 4 – Year 11) according to this study (Carrol et al, 1971). Understanding the limits of memory, and the pressure placed upon it for students in a whole-word approach, highlights the need for decoding strategies.

Wonder words teaches your students to read through decoding. They learn to break high frequency words into their phonemes systematically, and map the sounds to their corresponding letters. Once these words have been decoded several times, familiarity brings increased speed through a process known as orthographic mapping. Not to be confused with the memorisation of how a word looks, orthographic mapping is a mental process utilising the language processing centers of the brain to map the sounds of words to the spellings of those sounds. Students then permanently store those connected sounds and spellings of words as ‘sight vocabulary’.

Kilpatrick (2019) suggests that while orthographic mapping cannot be taught as an individual skill, phonemic awareness and phonics skills which enable orthographic mapping **can** be taught. These core skills, are at the heart of Wonder Words.





Below, Kilpatrick (2015) has identified the 3 phases of word reading development and how they are aligned with the following phonological skill development.

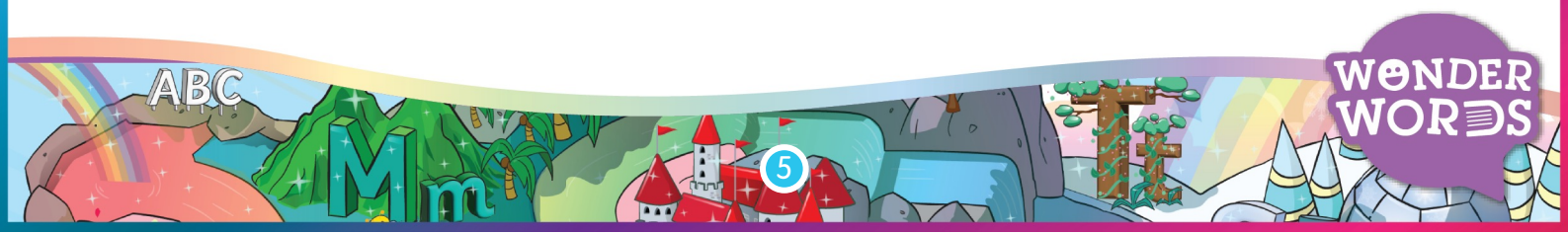
Word Reading	Phonological Skill
<b>Letters &amp; Sounds:</b> requires simple phonology to learn corresponding sounds and letters.	<b>Early phonological awareness:</b> rhyming, initial sounds, alliteration
<b>Phonic Decoding:</b> requires letter-sound knowledge to blend, ultimately leading to orthographic mapping.	<b>Basic phonemic awareness:</b> blending and segmenting
<b>Orthographic Mapping:</b> requires advanced phonemic awareness and letter sound skills.	<b>Advanced phonemic awareness:</b> phoneme manipulation

Clearly, the relationship between phonemic awareness, phonics knowledge and fluent reading, is an important one. Students naturally begin to orthographically map words with more exposure, therefore, Wonder Words has specifically designed a program which targets these critical phonemic awareness skills and enables ample exposure and time for students to engage in retrieval practice. This retrieval practice optimises the load on students' working memories to maximise their learning.

### Cognitive Load Theory

**How** we teach students to read is the last vital piece to this puzzle. Why is it that sometimes students can grasp a concept immediately, and other times they struggle with a concept for weeks or months on end? Dylan William (2017) recently described Cognitive Load Theory (CLT) as 'the single most important thing for teachers to know', but why is that? Sweller's CLT is built upon two universally accepted ideas. The first, is that there is a limit to how much **new information** can be processed by the human brain at one time. The second, is that there are no known limits to how much **stored information** can be processed at one time (Lovell, 2020). Sweller's CLT is grounded in a robust evidence base, and provides theoretical and empirical support for explicit models of instruction. Research into CLT determined that instructional techniques that have been designed in accordance with how human brains learn are the most effective (Sweller et al, 2011).

By embedding CLT based techniques into the classroom, teachers are able to maximise students' learning by better utilising working memory. The following diagram is a simple overview of the CLT.



# Why should you implement Wonder Words as a whole-school solution?

## New Information

The human brain can only process a very limited amount of new information at once.

### 1. Working Memory

New information is processed in the working memory. The brain can only hold onto a small amount of new information for a short period of time.

### Optimising Load

Information which is stored in the long term memory can reduce the load on the working memory.

### 2. Learning

Learning occurs when we successfully move this new information from our working memories into our long term memories.

### Cognitive Overload

Processing too much information at once can slow down learning or even stop learning from occurring due to cognitive overload.

### 3. Long Term Memory

Information is stored and organised in our long term memories in 'schemas'.

## Stored Information

There are no known limits to how much stored information the brain can process at once.

ABC

Mm

6

WONDER  
WORDS

Learning content within Wonder Words is heavily governed by evidence-based research, and the program has been designed in accordance with how students learn best. Wonder Words avoids cognitive overload by controlling the amount of information students have to receive and process. Time is built into the program to lessen the cognitive load of new information by engaging in retrieval of stored information. This pattern optimises students' working memories, allowing that new information to be learned and stored. This is why Wonder Words delivers results to all students in varying contexts.

Whether you are implementing Wonder Words as an intervention or whole school program, the flexibility of Wonder Words allows schools to pick and choose the key strands or areas of interest, whether that be *High Frequency Words Script* which encompasses phonemic awareness activities and the phonetic break-down of HFWS, or the *Phonics Script* which focuses on the core reading skills of blending, segmenting, and phoneme manipulation. Wonder Words **will** bring results to your school, and fast.

Lastly, as teachers are integral to the teaching of reading, the learning content within Wonder Words has been presented as **explicit scripts**, enabling even a novice teacher to use this language with accuracy from the very beginning, to avoid teaching the common misconceptions still present within education today. By following the scripts, regardless of a teacher's prior knowledge or understanding, students will be learning through evidence-based practice. This aside, it also serves as a learning process for both the teacher and student alike. We believe that through the use of these explicit scripts, teachers will also begin to understand the key principles behind them. Our program does not require extensive and expensive professional development, rather, teachers will learn alongside the students.

Wonder Words is very proud to deliver a program that is explicit, systematic, and evidence-based. Following, is a summarised table of the key concepts and skills that are crucial in the development of reading that Wonder Words targets.





## Wonder Words

<b>Phonological Awareness/Phonemic Awareness</b> Ranging from basic phonological awareness to more complex skills such as blending, segmenting and phoneme manipulation through Wonder Words' Phonics/High Frequency Words Scripts. See Appendix 1.	✓
<b>Synthetic Phonics</b> Targets the core conceptual knowledge and skills required for <b>reading and writing</b> in an explicit manner through Wonder Words' Phonics Scripts and student workbooks. See Appendix 2.	✓
<b>Fluency</b> Decodable readers and guided gestures throughout the explicit Phonics Script component of the program enables ample exposure/opportunities to consistently practise reading fluency. Along with the High Frequency Words content, students will begin to orthographically map words, enabling reading fluency.	✓
<b>Vocabulary</b> Morphology within the High Frequency Words Scripts, prominent with Year 1 and 2 scripts. Repeated exposure of words within explicit teaching content/student workbooks.	✓
<b>Comprehension</b> Targeted within our Wonder Word's app through the use of phonically controlled decodable readers and questions to go along with the decodable texts.	✓
<b>Oral Language</b> Oral language is targeted through developmentally appropriate speaking and listening games which increase the quality and quantity of oral language.	✓
<b>High Frequency Words/Sight Recognition</b> High frequency words are taught in a systematic manner, with words being broken down phonetically, with explicit teaching of corresponding graphemes with ample practise time to enable orthographic mapping.	✓
<b>Evidence-Based Practice</b> Wonder Words was developed following the culmination of research on the 'Science of Reading'.	✓

On behalf of the Wonder Words team, thank you for choosing to give your students the best start to their reading journey.

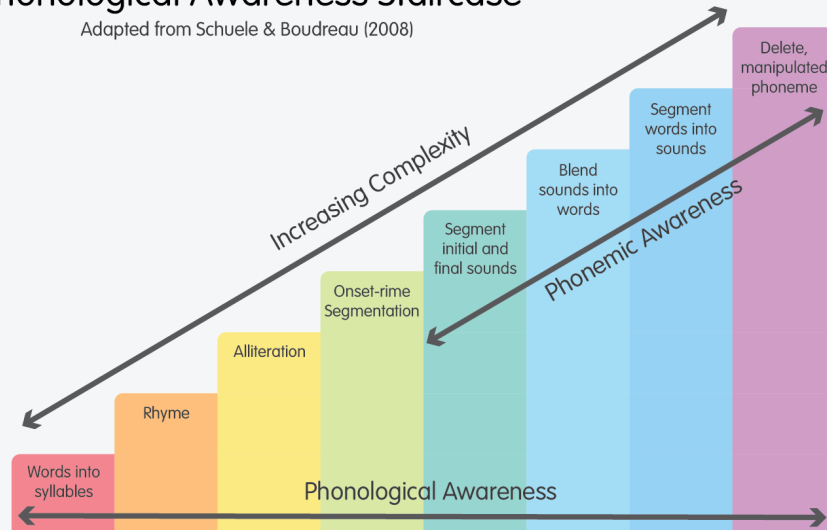
*The Wonder Words Team*



## Appendix 1

### Phonological Awareness Staircase

Adapted from Schuele & Boudreau (2008)



Phonological Awareness Staircase Adapted from Schuele & Boudreau (2008).

## Appendix 2

### Conceptual Knowledge

1. Letters are symbols (**spellings**) that represent sounds.
2. A single sound (**phoneme**) can be represented by 1, 2, 3 or 4 letters.

cat      greet      night      eight

3. A single sound (**phoneme**) can be represented by different spellings (**graphemes**).

train      steak      rake      day

4. One spelling (**grapheme**) can represent multiple sounds.

young      shout      group

### Skills

1. **Blending** – the ability to push sounds together to build words.

/d/ /o/ /g/ → dog

2. **Segmenting** – the ability to separate individual sounds in words.

dog → /d/ /o/ /g/

3. **Phoneme Manipulation** – the ability to insert and delete sounds in and out of words. This is a particularly important skillset, as it is necessary to test out alternatives for spellings that represent more than one sound when reading.

E.g. spelling <a>... is it /a/ as in rat, /A/ as in baby, or /o/ as in want?

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