WONDER WORDS

How Does Wonder Words Cater For Students That Identify With ADHD?

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Learning to read is a real challenge for many Australian children, particularly for the 20% of students living with a learning difficulty or disability (AIHW, 2020). The most important factor for teachers and parents to understand is that these students generally require more instruction, practice and variety in learning methods than their typically-developing classmates. Wonder Words has been designed from the ground up to support Australian teachers, parents and students with special needs. We recognise the unique needs of students with ADHD, that is why Wonder Words is a systematic package, that is highly flexible, multi-modal, game-based and centred in child led learning opportunities. Wonder Words is simple to use and highly effective, it allows all students to experience success in reading.

Research was front of mind when building Wonder Words so not only is our program easy to follow but it is also curriculum aligned and based on proven scientific research that education departments, academics and educators all around the world agree, is best practice. Wonder Words is a unique reading program built on high frequency words and synthetic phonics. Synthetic phonics is a systematic approach to teaching the 44 sounds of spoken English, along with the letter combinations used to read and write them. Think about the letter a, what sound does it represent? /a/ like in apple? Well not always, it depends on the context of the word. How about angel, ball, swan, fast, zebra? The letter a is representing a different sound in each of these words. Synthetic phonics teaches students how to correctly map these sounds and letters together which replaces earlier theories that there are words that cannot be sounded out and have to be learnt by 'sight'. This approach forms the High Frequency Words component of Wonder Words. High frequency words is the term for the collection of words that appear frequently in texts. This list consists of words that are made up of common and less common sound-spelling correspondences such as went - /w/ /e/ /n/ /t/ and said - /s/ /e/ /d/.

Traditionally the terms 'sight words' and 'high frequency words' have been used interchangeably; this is particularly true in early years and international education systems. However as synthetic phonics teaches how to sound out 'sight words' the

terminology is slowly being updated to better reflect that students do not have to rely on visual memorisation (sight) as the lone strategy to learn these words. During the Wonder Words Foundation program your child will learn their first 100 high frequency words and the most common sound-spelling correspondences that the letters of the alphabet make. The Year 1 and Year 2 programs continue this approach with an additional 100 words each, as well as all 44 sounds of the English language and the increasingly complex sound-spelling correspondences that represent them.

Wonder Words is the only program of its kind to be based on the Science of Reading, which is a collective body of research conducted by developmental psychologists, educational professionals, and cognitive neuroscientists, that has broken down the mystery behind how children learn to read. The evidence that the 5 key concepts (of Phonological Awareness, Phonics, Fluency, Vocabulary and Comprehension) produce capable readers is irrefutable (Snowling & Hulme, 2005). For this reason, Australian schools and Governments are slowly making these concepts compulsory aspects of the English curriculum.

This is why you may have noticed your child learning to read in a different way than you did at school. If so, it is likely that you learnt to read through the 'whole language' or 'balanced literacy' methods. These approaches have not inherently failed, after all, you are reading this right now. However, many studies in English speaking countries indicate poor literacy rates in a large number of adults. In particular, the OECD (2013) Found that 40–50% of adults in Australia have literacy levels below the international standard required for participation in work, education and society and this filters back down to the effectiveness of the methods used to first engage these adults in the reading process. The 20+ years of research that has resulted in the Science of Reading, indicates that by changing the focus to explicit and systematic teaching of the indicated key concepts, we can produce more capable readers faster and easier than these older methods. Wonder Words is designed so that these concepts are integrated into a range of fun and engaging activities that your child can complete by themselves or with the whole family. You do not need to be an expert, we have done the research so you don't have to. Your child will be on the cutting edge of best practice reading instruction, while you get an easy to follow program to support their development. Simply follow along and take an interest in what your child is doing.

What really sets Wonder Words apart from other programs is its cohesive structure that implements synthetic phonics and high frequency words together in a complete package for school and home. Evidence shows that early reading progress is most likely to occur when the teaching of reading concepts is explicit and systematic, especially for children who have reading difficulties (Snow, 2016). Additional research has also shown that phonics instructional approaches improve students' high frequency word reading ability (Ehri, 2014; Noltemeyer, Joseph & Kunesh, 2019; Schmidgall & Joseph, 2007). Phonics instruction is also extremely relevant in high frequency word acquisition because students must know their letter-sound correspondences before they can begin to decode words. By combining the repetition of high frequency words and phonics understanding, your child is in the fast lane to gaining fluency in reading. This approach leads to a quicker ability to comprehend text which leads to an effective and efficient reader. The whole point of learning to read, after all, is to be able to understand the message conveyed in what we have read.

Not only is Wonder Words light years ahead of the competition in regards to educational concepts and outcomes, but it is also highly engaging and accessible to all. As teachers and parents ourselves, we know that even the best intentioned programs fall flat unless they are interesting to children. That is why we placed equal importance on creating a program that is not only educational, but also stimulating in nature. You will see your child genuinely enjoy using Wonder Words.

Wonder Words recognises the unique requirements of ADHD students and allows facilitators to set clear, concrete, realistic goals to assist motivation. All activities are short and sharp so that students have a greater potential to maintain attentiveness. Decoding problems faced by students with ADHD can hinder their reading comprehension abilities. In order to comprehend, students need to free up cognitive demands. Accuracy, the ability to correctly decode words is one aspect of reading that can free cognitive demands (Hudson, Lane & Pullen, 2005). Wonder Words progressively builds on previous content, enabling students to decode words automatically, thus freeing higher order thinking processes to interpret meaning from the text instead (LaBerg & Samuels, 1974). With comprehension difficulties and inattention in mind, we have designed short tasks directly associated with the weekly sound or word focus. The aim is that attention does not become a consequence of reading comprehension. Instructions are multi-modal, explicit and systematic, all key requirements for ADHD students, who typically have difficulty identifying and decoding written words (McGrath et al., 2011). Text to Speech accessibility has been built in to every function of the interactive app and the design of Wonder Words features font, colour and layout choices that are proven to be calming and more visually accessible to all students (Rello & Baeza-Yates 2013).

Research shows that repetition and multiple exposures to new words (up to 15 times) are crucial to vocabulary development and all students, regardless of ability require opportunities to reinforce their skills in different contexts (Allen, 1999; Ehri & Saltmarsh, 1995; Golick, 1973; Marzano, 2005; Marzano, Pickering & Pollock, 2001). That is why the repetitive and predictable nature of the Wonder Words activities fosters the routine that children need and removes the frustration that is so common in learning to read. We have kept weekly content predictable in order to create a consistent routine students can rely on with minimum variations, it provides the required repetition without the

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boredom associated with completing the exact same activity over and over. Course materials and instructions are also presented in a structured way using literal language to avoid confusion and maintain simple abstract comprehension. As a result, Wonder Words builds confidence and success right from the start. Children are proud of their achievements straight away and all children achieve using this program.

The home component of Wonder Words consists of weekly content packs and access to the Wonder Words app. These not only complement the concepts that are covered in the school program but they can also be used independently to achieve the same great results. As a guide, each activity takes about 10 minutes and we encourage children to complete at least 3 per week. Put your child in control and if they want to do more, they can. The order and activity type are also not important, so if your child only wants to complete the boardgame or colouring pages – let them! The application contains 30 minutes of content that revises the sound, letter and word focus for each week. Again, your child can choose to do more or less and keep in mind that they might also use the app at school.

The intuitive nature of the Wonder Words print and digital content comes from designing each component around the Universal Design for Learning Guidelines. The UDL is a framework to improve and optimise teaching and learning for all people based on scientific insights into how humans learn (CAST, 2018). We have then carefully considered the design requirements of ADHD students to provide a supportive, calm and distraction free environment. Our 'Hero Owl' protagonist features consistently throughout the activities and interactive app to ensure a relatable and consistent character experience. Font choices have been selected for readability on both paper and screen and the deliberate use of secondary colours such as brown, orange, green and pink has been shown to be less distracting for students that experience hyper sensitivity to colour (Grandgeorge & Masataka, 2016). As a result, the design of the Wonder Words program is inclusive of special needs and progressive while retaining a level of familiarity. This allows all students to be self-directed and confident learners.

Game based learning has been considered with hands on activities in the weekly content as well as through the redesigned digital application, which complement the school and

home focus. Games have been developed to allow students to participate in group work or to work autonomously if group work proves too stressful. The positive effects of game-based learning are well documented, Kang and Tan (2014) found educational games in the classroom to be intrinsically motivating for students, and that the motivation extended or transferred to the subject matter itself. The Wonder Words app has been designed to provide learners with a choice of activities to also increase their enjoyment and motivation (Ryan & Deci, 2002; Turkay, Hoffman, Kinzer, Chantes & Vicari, 2014). Furthermore, using games in learning ensures all participants are winners because they have the opportunity for involvement and engagement in a fun learning experience (Allery, 2014).

In summary, the Wonder Words program is structured to provide your ADHD child with everything they need to start their reading adventure. This journey continues through Year 1 and Year 2, as your child develops more complex skills and a love of reading. Featuring tailored content and a digital app, along with a range of supporting materials and a huge collection of readers, Wonder Words is a fully self-contained program that has everything you need to set your child up for early reading success. This unique approach to reading, anchored in cutting edge research, allows for a highly flexible program that caters to the needs of all students and parents. The Wonder Words program allows everyone to experience success in reading.

Appendix

Phoneme	A single speech sound. /a/ in ant.
Grapheme	A letter or group of letters that represent a sound. ant, ship, right
Graph	One letter making one sound ant
Digraph	Two letters making one sound. /sh/ in ship.
Trigraph	Three letters making one sound. /igh/ in right.
Diphone	One letter making two sounds. /o/ in one.
Phonological Awareness	The ability to recognise and manipulate chunks of sounds in spoken words and identify patterns such as rhyme and alliteration.
Phonics	The relationship between mapping phonemes to graphemes.
Fluency	Being able to read with accuracy, speed and expression.
Vocabulary	Building a bank of familiar words to use in reading, writing, speaking and listening.
Comprehension	Being able to understand what you have read in a text.
Etymology	Being aware of the origins of words to understand their definitions and spelling patterns.

Glossary of concepts covered in the Wonder Words program.

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References

Allery, L. (2014). Make use of educational games. Education for Primary Care, 25(1), 65-66.

CAST (2018). Universal Design for Learning Guidelines version 2.2. Retrieved from http://udlguidelines.cast.org

Ehri, L. C. (2014). Orthographic mapping in the acquisition of sight word reading, spelling memory, and vocabulary learning. Scientific Studies of Reading, 18(1), 5-21.

Ehri, L. C., & Saltmarsh, J. (1995). Beginning readers outperform older disabled readers in learning to read words by sight. Reading and Writing: An Interdisciplinary Journal.

Grandgeorge, M., & Masataka, N. (2016). Atypical Color Preference in Children with Autism Spectrum Disorder. Frontiers in psychology, 7, 1976. https://doi.org/10.3389/fpsyg.2016.01976

Hudson, R. F., Lane, H. B., & Pullen, P. C. (2005). Reading fluency assessment and instruction: What, why, and how?. The Reading Teacher, 58(8), 702-714.

Kang, B., & Tan, S. H. (2014). Interactive games: Intrinsic and extrinsic motivation, achievement, and satisfaction. Journal of Management and Strategy, 5(4), 110-116.

LaBerge, D., & Samuels, S. J. (1974). Toward a theory of automatic information processing in reading. Cognitive psychology, 6(2), 293-323.

McGrath, L. M., Pennington, B. F., Shanahan, M. A., Santerre-Lemmon, L. E., Barnard, H. D., Willcutt, E. G., ... & Olson, R. K. (2011). A multiple deficit model of reading disability and attention-deficit/hyperactivity disorder: Searching for shared cognitive deficits. Journal of Child Psychology and Psychiatry, 52(5), 547-557.

Noltemeyer, A. L., Joseph, L. M., & Kunesh, C. E. (2019). Effects of supplemental small group phonics instruction on kindergartners' word recognition performance. Reading Improvement, 56(3), 149-160.

OECD (2013). Survey of Adult Skills First Results – Australia. Retrieved from https://www.oecd.org/skills/piaac/Country%20note%20-%20Australia_final.pdf

Rello, L., & Baeza-Yates, R. (2013). Good fonts for dyslexia. Assets '13: Proceedings of the 15th international ACM SIGACCESS conference on computers and accessibility (pp. 1-8).

Ryan, R. M., & Deci, E. L. (2002). Overview of self-determination theory: An organismic dialectical perspective. Handbook of self-determination research, 2, 3-33.

Schmidgall, M., & Joseph, L. M. (2007). Comparison of phonic analysis and whole word-reading on first graders' cumulative words read and cumulative reading rate: An extension in examining instructional effectiveness and efficiency. Psychology in the Schools, 44(4), 319-332.

Snow, P. C. (2016). Elizabeth Usher memorial lecture: Language is literacy is language - Positioning speech-language pathology in education policy, practice, paradigms and polemics, International Journal of Speech-Language Pathology, 18:3, 216-228. https://doi.org/10.3.109/17549507.2015.1112837

Snowling, M. J., & Hulme, C. (Eds.). (2005). The science of reading: A handbook. Blackwell Publishing

Turkay, S., Hoffman, D., Kinzer, C. K., Chantes, P., & Vicari, C. (2014). Toward understanding the potential of games for learning: Learning theory, game design characteristics, and situating video games in classrooms. Computers in the Schools, 31(1-2), 2-22.

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