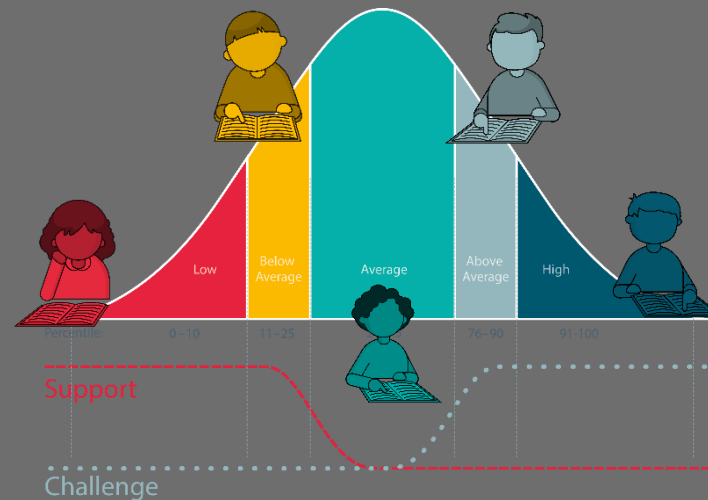




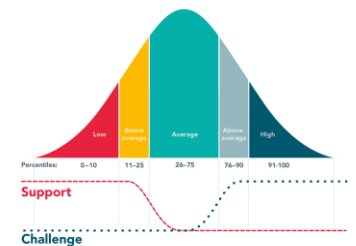
Lexplore Intensive Supporting Resources



Lexplore
ANALYTICS

Contents Page

Alphabet Arc (Rainbow) Activities	2-3
Development of Memory to Support Learning	4
Working Memory	4-7
Auditory Memory	8-9
Visual Memory	10-11
Visual Sequential Memory	12
Additional Resources	13-14
Visual Processing Difficulties	15-17
Auditory Processing Disorder	18-19
Syllabification	20
Resources to Support Phonological Development	21-23
Multisensory Learning	24-26
Metacognition – Learning How to Learn	27
Appendices	28
Appendix 1- Sample Reception Lesson Plan	29

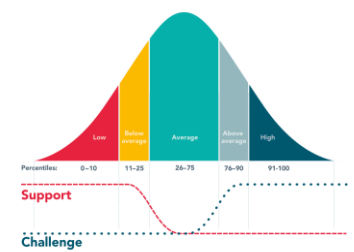


Appendix 2 – Sample Year 1 Lesson Plan

Appendix 3- Sample Year 2 Lesson Plan

..... 30

..... 31



Alphabet Arc (Rainbow) Activities

Description

Wooden, plastic or similar letters are set out in an arc which is within the learner's peripheral vision. The arc takes up less space than a single line and also leaves space in the middle of the arc to use for related activities and games.

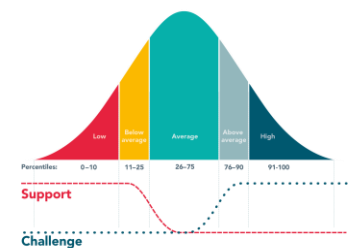
Rationale

Alphabet work is highly beneficial because it offers students an opportunity to take part in fun activities that are multisensory, particularly as it involves kinaesthetic and tactile learning, without requiring writing. Magnetic, plastic or wooden letters are used. These can be both upper or lower-case letters, though upper-case are often easier for learners to distinguish, particularly if they have difficulties distinguishing orientation of letters.

The learner sits in the middle of the area of work so that an arc can be formed in front of them. They choose the letters from the selection in front of them. The position of the first and last letters (A and Z) and then the middle letters (M and N) are 'markers' to help the learner set out the full alphabet within the space available, placing all the letters with their correct orientation. The learner must name the letters aloud as they set them out, so that they are using a multisensory approach, and should say and hear the name (auditory), see it (visual) and link it to the letter shape (kinaesthetic). Similarly, when they have formed the arc, they should go around it in sequence, tracing each letter and saying its name and sound. The teacher then asks the learner to look carefully and check so that the principle of self-correction is established. Work with the alphabet arc provides an opportunity for overlearning letter recognition and reinforcing sequencing. Many games can be played using the arc.

Letter recognition

- The learner closes their eyes and names a letter by feeling it and then checking this by looking.
- The teacher traces a letter on the learner's back, so they can feel it, the learner must then name it and remove it from the arc.



- The learner touches and names each letter in turn, giving its name and sound.
- The learner takes out the vowels and the teacher highlights that they can have a long and a short sound.
- The learner can touch a consonant and name it and then a vowel etc.

Sequencing

- Asking the learner which letter comes before/after a selected letter.
- Asking the learner to close their eyes whilst the teacher removes one or more letters. The learner then looks at the arc to determine the missing letters saying their names and sounds aloud.
- 3 or 4 consecutive letters are removed by the teacher and the learner has to replace them in the correct order naming them as they do so.
- The learner closes their eyes and points to where they think a particular letter is placed in the arc and then opens their eyes and checks this.

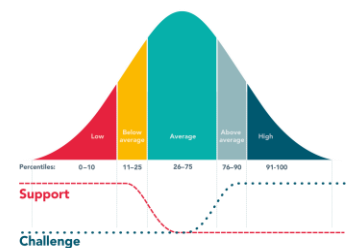
The alphabet is then put away. This is an opportunity to reinforce the concepts learnt. Activities include:

- Putting every third letter away. Once the learner reached the end, they continue round and repeat, saying every letter name and sound, including the missing letters out loud, until all the letters have been put away.
- Mixing all the letters up and asking the learner to put them away in alphabetical order.
- The learner puts away a designated letter and then the one before and the one after it.
- The learner puts all the vowels away and then all the consonants.

The learner should be reminded to always name the letters aloud during activities.

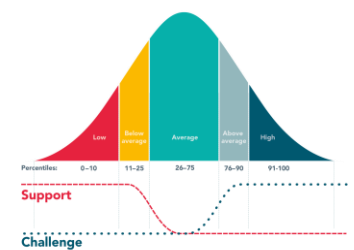
Once the learner places all the letters correctly within a short amount of time, there are several ways that the level of difficulty can be progressed:

- Setting out the alphabet in reverse order (Z to A), after putting out the markers.
- Taking letters in any order from a box and putting them in the correct position in the arc.
- Starting from M and N and placing the letters before M and after N in alternate order.



The 'Alphabet Rap' provides an alternative to the traditional alphabet rhyme. This helps with overlearning (as letters are repeated in sequence) and the medial part of the alphabet is much clearer. It goes like this:

A, B, A, B, C, A, B, C, D, E, F, G. H, I, H, I, J, H, I, J, K, L, M, N. O, P, O, P, Q, O, P, Q, R, S, T, U. V, W, V, W, X, V, W, X, Y, Z, Z, Z,
Now it's in my head, head, head!



Development of Memory to Support Learning

The development of memory (particularly Working Memory) is crucial to the success of students following the Lexplore Intensive programme. In order to retain what they are learning; students need to develop strategies which will support their memory and ultimately improve their retention and overall learning ability. Being aware of their memory strengths and limitations can also enable students to deploy compensatory strategies very effectively.

The following will look at the various areas of memory and suggest strategies and resources which may help.

Working Memory

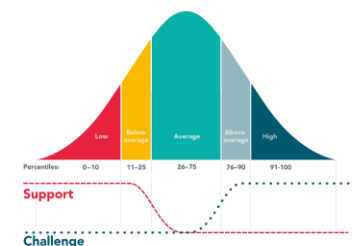
This is the term used to refer to the ability we have to hold and manipulate information in the mind for short periods of time. Alloway refers to it as “the brain’s post it note” (<https://uk.sagepub.com/en-gb/eur/all-about-working-memory-your-brains-post-it-note>). There is a limit to the amount of information that can be held in the Working Memory, this is strictly limited and if this limit is exceeded, then at least some of what we are trying to remember is forgotten. How much information can be stored is affected by many factors, particularly in the school environment, where background noise can affect retention.

Working Memory helps children hold on to information long enough to use it and plays an important role in concentration and in following instructions. Weak Working Memory skills can affect learning in many different subject areas including reading, writing and mathematics. Children use Working Memory in the classroom, when they need to retain important information, such as instructions from the teacher, in the face of distractions from classmates, wall displays, noises outside, and their thoughts and feelings.

A very useful booklet is: ‘Understanding Working Memory, A Classroom Guide’:

- <https://www.mrc-cbu.cam.ac.uk/wp-content/uploads/2013/01/WM-classroom-guide.pdf>

This provides an introduction to Working Memory and the role it plays in everyday life, especially in supporting learning in school. The learning difficulties commonly faced by children with very poor



Working Memory skills are described and are illustrated with case studies. A programme of classroom support for children with Working Memory difficulties is outlined.

Strategies to enhance working memory

1. Give directions in multiple formats

Students benefit from being given directions in both visual and verbal formats. In addition, their understanding and memorizing of instructions could be checked by encouraging them to repeat the instructions given and explain the meaning of these instructions. Examples of what needs to be done are also often helpful for enhancing memory of directions.

2. Teach students to over-learn material

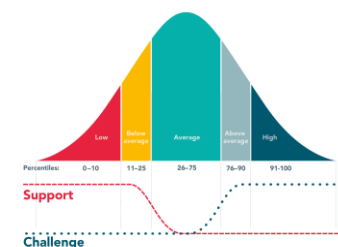
Students should be taught the necessity of 'over-learning' new information. Often, they practice only until they are able to perform one error-free repetition of the material. However, several error-free repetitions are needed to solidify the information.

3. Teach students to use visual images and other memory strategies

Another memory strategy that makes use of a cue is one called 'word substitution'. The substitute word system can be used for information that is hard to visualize, for example, for the word 'occipital' or 'parietal'. These words can be converted into words that sound familiar but can be visualized. The word 'occipital' can be converted to 'exhibit hall' (because it sounds like 'exhibit hall'). The student can then make a visual image of walking into a museum and seeing a big painting of a brain with big bulging eyes (occipital is the region of the brain that controls vision). With this system, the word the student is trying to remember actually becomes the 'cue' for the visual image, that then 'cues' the memory of and definition of the word.

4. Give teacher-prepared handouts prior to classes

Lessons and series of oral directions should be reinforced by teacher-prepared handouts. The handouts for lessons could consist of a brief outline or a partially completed graphic organizer that the student would complete during the lesson. Having this information both enables students to identify the salient information that is given during the



lesson and to correctly organize the information in their notes. Both of these activities enhance memory of the information as well. The use of Post-Its to jot information down on is helpful for remembering instructions.

5. Teach students to be 'active readers'

To enhance Short-Term Memory registration and/or Working Memory when reading, students should underline, highlight, or jot key words down in the margin when reading chapters. They can then go back and read what is underlined, highlighted, or written in the margins. To consolidate this information in Long-Term Memory, they can make outlines or use graphic organizers. Research has shown that the use of graphic organizers increases academic achievement for all students.

6. Write down steps in mathematical problems

Students who have a weakness in Working Memory should not rely on mental computations when solving mathematical problems. For example, if they are performing long division problems, they should write down every step including carrying numbers. When solving word problems, they should always have a spare piece of paper handy and write down the steps in their calculations. This will help prevent them from losing their place and forgetting what they are doing.

7. Provide retrieval practice for students

Research has shown that Long-Term Memory is enhanced when students engage in retrieval practice. Taking a test is a retrieval practice, i.e. the act of recalling information that has been studied from Long-Term Memory. Thus, it can be very helpful for students to take practice tests. When teachers are reviewing information prior to tests and exams, they could ask the students questions or have the students make up questions for everyone to answer rather than just retelling students the to-be-learned information. Also, if students are required or encouraged to make up their own tests and take them, it will give their parents and/or teachers information about whether they know the most important information or are instead focused on details that are less relevant.

8. Help students develop cues when storing information

According to memory research, information is more easily retrieved when it is stored using a cue and that cue should be present at the time the information is being retrieved. For example, the acronym



HOMES can be used to represent the names of the Great Lakes — Huron, Ontario, Michigan, Erie and Superior. The acronym is a cue that is used when the information is being learned and recalling the cue when taking a test will help the student recall the information.

9. Prime the memory prior to teaching/learning

Cues that prepare students for the task to be presented are helpful. This is often referred to as ‘priming the memory’. For instance, when a reading comprehension task is given, students will get an idea of what is expected by discussing the vocabulary and the overall topic beforehand. This will allow them to focus on the salient information and engage in more effective depth of processing. Advance organizers also serve this purpose.

10. Review material before going to sleep

It should be helpful for students to review material right before going to sleep at night. Research has shown that information studied this way is better remembered. Any other task that is performed after reviewing and prior to sleeping (such as getting a snack, brushing teeth, listening to music) interferes with consolidation of information in memory.

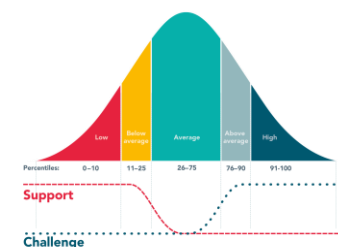
(Taken from: <http://www.readingrockets.org/article/10-strategies-enhance-students-memory>)

Auditory Memory

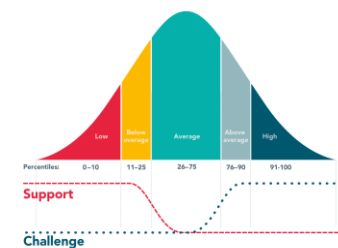
Auditory Memory is the ability to take in information that is presented orally (out loud), process it, retain it in one's mind, and then recall it. Auditory Memory requires the involvement of Working Memory.

There are many games and tasks which can help to improve Auditory Memory:

- Memorise and recall sequentially approximately four (this should be individualised, according to the capability of the student) digits/objects/pictures/letters orally, once heard.



- Memorise and recall backwards approximately three (again, this should be individualised, according to the capability of the student) digits/objects/pictures/letters once heard orally (this also challenges the Working Memory).
- Chaining games - Adapting oral games to include Auditory Sequential Memory, such as 'I went to the computer shop and bought...' gradually increasing the number of items that the child needs to recall. Take it in turns to add a piece of information to a list and each turn you have to recall the list in full. To keep it interesting, think of items in different categories: - I went to space and I saw... I went to the zoo and I saw... I went to the park and played on...
- Another element to these games can be made by adding a description to your item. So rather than just seeing a tiger at the zoo, you could see a tiger with stripes. Instead of just seeing a monkey, you could see a monkey eating a banana.
- Expanding sentences - this is similar to chaining games, but you add information to each other's ideas. You could make some interesting stories. Again, when it is your turn you have to recap the sentences that has been generated so far and then add a new piece of information. For example: "I played Minecraft." "I played Minecraft on Saturday" "I played Minecraft on Saturday and built a house out of sandstone" "I played Minecraft on Saturday and built a house out of sandstone and a creeper blew it up!"
- Remembering parts of a story - when you are reading with the child before you turn the page over you can ask specific questions about the page you have just read. What was the boy's name? Where did they travel to? What did they forget? etc. This is a great activity as it also helps the child learn how to extract key pieces of information.
- Remembering a specific item - ask the child to remember an item at the start of an activity and then ask them what it was at the end. This requires them to remember over time.
- Orienteering/treasure hunt activities - the child can be given instructions to find a hidden object. Again, initially you could give instructions one at a time, but as they improve you could give 2 or 3 instructions together e.g. "go to the kitchen door, take 4 paces into the kitchen and look under the bowl".
- Taking messages - If there is another adult or child available, you could ask the child to take a message to them. For example, "tell your brother there is a letter for him on the table". If necessary, you can let the other person know the message, so they can help the child remember if they have difficulty.
- Drawing to instruction - encourage the child to draw a picture and give them directions to follow. This activity can also be turned around so that the child has to tell you what to draw. You could describe something simple like a house, or a treasure map – whatever the child is interested in.

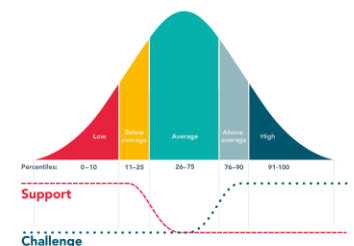


- The 'Following Instructions' set of cards are another useful resource as it mixes a number of instructions and gradually increases the number of instructions which need to be recalled. It also produces a great deal of variety in tasks. The cards (the chute itself is not necessary) can be purchased from:
 - <https://www.smartkids.co.uk/search?q=following+instructions>
- A really useful handout regarding supporting children to develop their Auditory Sequential Memory may be found at:
 - <http://www.talkingpoint.org.uk/sites/talkingpoint.org.uk/files/afasicglossary25.pdf> .
 This covers using strategies such as chunking instructions, visual imagery and mnemonics to support children.
- 'Ready Set Remember' is a really useful downloadable guide to short-term Auditory Memory activities and may be found at:
 - https://www.peirsoncenter.com/uploads/6/0/5/5/6055321/iif_kgpm_mense_ready_set_remember.pdf.pdf

Visual Memory

Visual Memory is the ability to recall information that has been presented visually. A person must be capable of making a vivid visual image in their mind of the stimulus, such as a word, and once that stimulus is removed, be able to visualise or recall this image without help. Various researchers have stated that as much as 80% of all learning takes place through the eye with Visual Memory existing as a crucial aspect of learning. A student with Visual Memory difficulties may have challenges with:

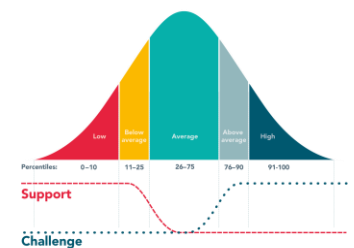
- Remembering the overall visual appearance of words or the letter sequence of words for reading and spelling
- Remembering the order of letters in a word, even if they can remember the letters themselves
- Developing a good sight vocabulary (words that are memorised as a whole by sight, so they can be automatically recognised) and frequently experience some writing and spelling difficulties
- Comprehension of written materials
- Remembering what a word looks like or recognising the same word on another page
- Copying assignments, as they need to frequently review the text



- You may also find that they often subvocalize, or softly whisper to themselves, as they read in order to help compensate auditorily.

There are lots of activities that can help children to improve their Visual Memory skills:

- Recall object and picture features: look at an object or picture and talk about its features, then take the object away and ask your child to try and recall some of its features
- Complete the shape or picture: look at a shape/picture and then cover half of it over, try and complete the shape/picture from memory
- Spot the difference is a great way to help with this skill as children have to remember the image and they look between the two. There is a great online version to be found at:
 - <http://www.spotthedifference.com/>
- Missing object game: place some everyday objects on a table and let your child memorise them for a few minutes. Then cover the objects with a kitchen towel and take one away and ask your child to work out which one is missing. This game is often called Kim's Game.
- Word Bingo: Play bingo using simple high frequency words.
- Use bendable objects such as pipe cleaners to form letters and shapes (because feeling a shape can help your child visualise this, as well as developing the kinaesthetic memory). The letters can then be glued onto index cards, and later the child can touch them to 'feel' the shape of the letter
- The Memory Skills cards are another great resource (there are four levels). These are useful to develop Visual Memory skills and improve Working Memory. On the front are pictures, numbers, and/or colours to memorise. The flip side of the card then asks a question, e.g. showing the same illustration with something missing. These are available at:
 - <https://www.smartkids.co.uk/products/memory-skills-chute-cards-smart-buy>



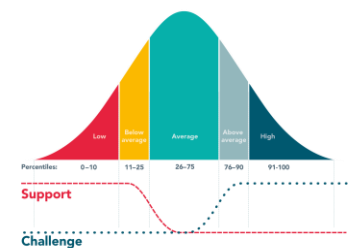
Visual Discrimination/Memory websites:

- www.eyecanlearn.com - provides a number of sequencing and tracking activities and is often recommended by the SpLD clinic at the Orthoptic Department.
- www.innerpiecesgallery.com - also provides a number of very good resources.

Visual Sequential Memory

Visual Sequential Memory is the ability to remember visual details in the correct sequence. There are a number of activities that can help to improve Visual Sequential Memory skills:

- Play word games such as hangman, word searches or crossword puzzles.
- Beading is a great activity to work on following a pattern/sequence.
- Practise memorising sequences of objects, shapes or colours. Visual Sequential Memory can be developed by stringing bead patterns on necklaces, memorising sequences of shapes or by remembering a series of objects (e.g. a shopping list).
- Practise finding patterns in letters, numbers, shapes or objects within a sequence to help remember it. It may help to look for patterns or repeated parts. This streamlines the memory process by reducing the number of units the child needs to remember. There are many printable examples to be found on the internet, simply google 'visual scanning' and search for images. The Ann Arbor series of tracking books may also be useful.
- Use prepared flash cards or pieces of paper with pictures of familiar objects pasted on them, one object per page. Begin by showing the child three flash cards sequentially, allowing one second for each card, then ask the child to name the items in the order they were seen. As sequential memory improves, increase the number of cards for each round.
- Use visual images to help the child remember information in a particular order. A useful activity for children is to place a number of images (three or four to begin with) that relate to a specific subject and ask them to tell a story about the images, linking one to the next but using the



correct name for each image. Remove the cards and take a short break, then ask the child to retell the story. Increase the number of images displayed as the child becomes more confident.

- Dot-to-dot puzzles are incredibly useful for helping with sequencing and visual perception. The series 1000 dot-to-dot books by Thomas Pavitte are more 'grown up' and can be completed in sections over time.
- Mazes, word searches and 'spot the difference' puzzles can also be used to help with visual perception issues. To further develop visual sequencing, the 'Building Block' resource is extremely useful in developing letter recognition through maze games. They can be accessed at:
 - <https://www.education.com/slideshow/letter-mazes-z/>

Additional Resources

TTS (www.tts-group.co.uk) provide a range of books within their 'Rapid Recall' series which cover Visual, Auditory and Working Memory.

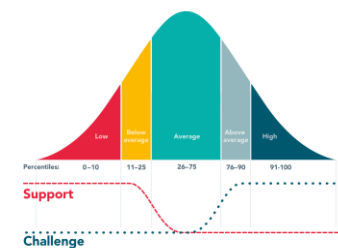
Rapid Recall - <https://www.tts-group.co.uk/rapid-recall-memory-skills-worksheet-book/1008644.html>

Book Description

"The tasks are of a visual-motor nature and are time-limited, with motivational bonuses awarded for speed of completion. They are a useful diagnostic tool for detecting perceptual and motor difficulties.

Suitable for whole class, small group or individual work, their purpose is to extend and develop working memory and processing speed in addition to improving handwriting speed and neatness".

Rapid Recall Auditory Memory - <https://www.tts-group.co.uk/rapid-recall-auditory-memory-book/1017811.html>



Book Description

“Working memory is responsible for many of the skills children use to learn to read. Auditory working memory helps them hold on to the, sounds letters make long enough to sound out new words. Children with under-developed auditory memory will struggle to process, analyse, store and retrieve information or ideas they hear, resulting in low self-esteem and lack of confidence. This book is ideal for use either on a one-one to basis, intervention groups or for a whole class.

As one of the most important learning skills, children with weak auditory memory often have difficulty understanding what words mean and can show a delayed grasp of language. This is because phonics requires auditory short-term memory for children to remember word sounds and piece them together to form words”.

Rapid Recall Visual Memory - <https://www.tts-group.co.uk/rapid-recall-visual-memory/1016926.html>

This skill helps children remember what they read and see by adequately processing information through their short-term memory and into the long-term memory. Children with poor visual memory may struggle with comprehension.

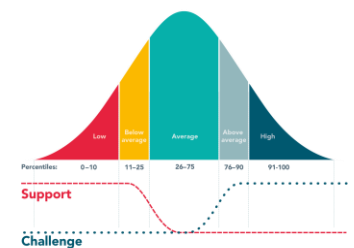
These activities use pictures, shapes, words, patterns and numbers to develop strategies to help improve visual working memory. All pages are photocopiable, meaning they can be used over and over. Suitable for whole class, small group or individual work.

Board Games, Apps and Computer based games

There are a number of board games which help with visual memory and perception, sequencing and processing. For example: Qbitz, Cornered, Square Up, Shaperise and Dobble

There are many Apps and Computer based Memory Games available to support memory development.

- www.phonicsplay.co.uk for example, provides some great phonics related memory matching games.



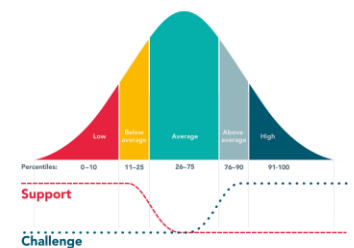
Visual Processing Difficulties

Students who are struggling to read and spell, may suffer from visual processing difficulties. Students will need to be diagnosed by an appropriate professional, however there are many adjustments and strategies which can be used to support them.

Visual Processing difficulties can cause problems for many people because they alter the way they see things. Difficulties are sometimes referred to as Scotopic Sensitivity, Irlen Syndrome or Visual Stress and can also incorporate difficulties with tracking text. The eyes are not the main source of the problem. Such eye problems are based on visual perception. Difficulties are caused by the way in which the brain interprets visual information which is being sent through the eyes. Having visual processing difficulties prevents many people from reading effectively and efficiently as they perceive reading material and/or their environment differently. They must constantly make adaptations or compensate for their eye problems. Often individuals are unaware of the extra effort and energy they are putting into reading and perception. Symptoms can include:

General Difficulties

- Strain working under bright lighting
- Difficulty finding comfortable lighting
- Poor concentration
- Lack of attention
- Strain working at a computer
- Glare from bright objects
- Eye strain
- Headaches from: reading, computers lighting, TV



Reading

- Poor comprehension
- Skips words or lines
- Reads slowly or hesitantly
- Loses place
- Takes frequent breaks
- Avoids reading
- Eye strain

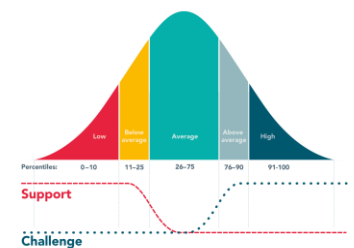
Judging Distances

- Clumsy / Accident prone

Other Difficulties

- Difficulty with number columns
- Difficulty Reading music
- Difficulty writing on the line
- Unequal spacing when writing
- Bumps into things
- Difficulty catching small balls

As previously stated, students need to be diagnosed by a professional such as an Orthoptist (who has the responsibility of seeing how the eyes work together and interact with the brain to create vision), at a specialist Opticians or some areas have specialist clinics within their NHS provision. An example of this is the SpLD Orthoptic Clinic provided by Lancashire Teaching Hospitals NHS Trust.



The worksheet-based book: 'Eye Can', contains a high number of useful exercises to develop visual tracking and visual discrimination. It can be found at:

- [https://www.tts-group.co.uk/eye-can-visual-skills-assessment-for-reading-book/1004826.html?cgid=Primary-SEN-Dyslexia-Visual Discrimination](https://www.tts-group.co.uk/eye-can-visual-skills-assessment-for-reading-book/1004826.html?cgid=Primary-SEN-Dyslexia-Visual%20Discrimination)

The following website also contains many useful hints and tips to help to improve visual tracking:

- <https://learningspecialistmaterials.blogspot.com/2014/11/10-free-ways-to-improving-visual.html>

Developing tracking skills, will also help to improve a student's reading comprehension and rate, by improving eye movements and avoiding reversals, omission, substitutions and additions. The Ann Arbor series contains a large number of tracking exercises, for further information, see:

- https://www.annarbor.co.uk/index.php?main_page=index&cPath=253_14

There are also a number of freely available resources, such as:

- <http://www.phonicslessons.co.uk/trackingactivities.html>
- <https://innerpiecesgallery.com/>
- <http://eyecanlearn.com/tracking/>



Auditory Processing Disorder

(Information adapted from the Auditory Processing Disorder in the United Kingdom (APDUK) online information leaflet-2002)

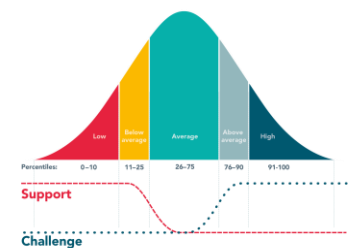
For those who have Auditory Processing Disorder (APD) it is the auditory information processing function, which has a 'faulty' connection. Those with APDs are normally not deaf, in fact most people with APD have A1 hearing, they just do not process what they hear. They may process part of what they hear but, without processing the rest, often the whole meaning is lost, or they perceive a totally incorrect idea of what has been said.

When APDs have a processing failure, they do not process what is being said to them. They may be able to repeat the words back word for word, but the meaning of the message is lost, not processed. Simply repeating the instruction is of no use if an APD is not processing, neither will increasing the volume help. Most APDs have 'random Auditory Processing Disorder'. The word 'random' is used, because those with APDs cannot control when they accurately process auditory information and when they do not. A good analogy is like a loose connection in a faulty computer processor, that fails when you least expect it to.

APDs have an Auditory (verbal) information Processing Disorder, therefore APDs will also have problems processing verbal code, and text is only verbal code. So APD is extended to reading and writing, processing auditory code. Therefore, APD can be seen as one of the causes of dyslexia (as is the corresponding Visual Processing Disorder, but for very different reasons).

Some APDs are easily distracted by background noise and/or unexpected noises. These environmental factors disrupt their processing strategies, and in many instances, mean that they have to go right back to the beginning of the task, to understand what they are trying to do. This can sometimes be a particular case for conceptual subjects, such as mathematics.

APDs will process a discussion, as it unfolds, and may not fully understand the discussion there and then, but they may be able to fill in the gaps later. Eventually they may have a better understanding of the topic than the actual participants, when they have finally processed the information.



Coping Strategies

Coping Strategies for APD are developed on individual life experiences. This is because the strategies have to work in and be stored in the limited space of the Short-Term Memory. Those with an APD develop and select strategies they need to cope with their own life challenges, some are rejected or forgotten if not used.

New strategies are always being developed. Unfortunately, some of the newer strategies may by-pass an existing strategy and so this useful strategy may need to be 'relinked' into the system. Hence those with APD can perform a specific task on one day perfectly but struggle on a later day.

Many people with APD develop an alternative way of thinking to cope with their difficulties. So, if the auditory function is faulty, people will often try to develop their visual and other communication skills (sometimes, unconsciously). Some become Visual Spatial Learners, using visual (pictorial) methods of thinking and learning. Some people with APD, use back up strategies, such as lip-reading, body language, and eye contact.

Hidden Implication

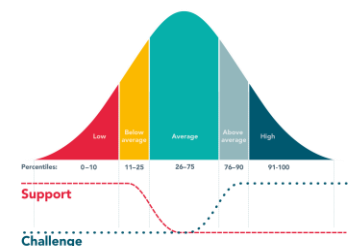
APDs cannot be 'cured', however, with the correct diagnosis, remediation and strategies, APD sufferers can learn to cope with the difficulties they experience. Sometimes, those with APDs may find groups of more than 3 or 4 people more challenging, as they are often unable to process multiple auditory (verbal) input.

Those with APDs may have problems filling in textual forms. Their challenges in processing, lead to difficulties understanding what the meaning of the questions are, which will in turn cause problems when trying to process an answer.

Those with APDs who have a high IQ are more difficult to diagnose, as they are very good at developing their own coping strategies.

A useful website giving extensive information has been put together by Alyson Mountjoy, co-founder of APDUK. This can be found at:

- <https://apdsupportuk.yolasite.com/>



Ideas to Support Reading

Paired Reading

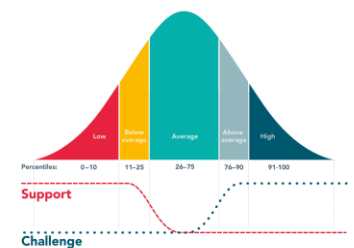
Neil Mackay is a great advocate for Paired Reading, details of which may be found in his very useful book, 'Taking the Hell out of Homework'. Paired reading is probably the most effective way of understanding text, especially for a child who thinks faster than he currently reads. The child chooses what to read. This is a key principle in terms of reading as a purposeful activity so be prepared to accept magazines, web pages etc.

- Child and teacher/TA/parent read out loud at the same time – the stronger reader may track the words with a finger or marker if appropriate.
- Unknown words are read without pause or comment by the teacher/TA/parent – they will slow down and point to words as they read, to enable the child to catch up.
- No teaching, criticism, or learning points are appropriate during this activity – the emphasis is on reading for pleasure in a non-threatening and supportive environment.

Games

The trugs games are a fun and competitive way for children to develop their skills and understanding in reading and spelling. They are organised into cumulative stages, building on success. These are based upon systematic, synthetic phonics. Further details can be found at:

- <https://www.readsuccessfully.com/>



Syllabification

The difficulties many students face with processing auditory information, make it challenging at times to accurately identify syllables, particularly medial syllables of more complex, polysyllabic words. Students need to be taught to syllabify words, both when reading and spelling.

This can be done in a fun way for example, dropping marbles into a tin, to distinguish how many syllables a word contains. Developing the skill of syllabification will help students to be able to distinguish the individual syllables, then phonemes and so on. Alternatively, they can be taught to syllabify words, using different colours. For example, the word 'to mor row' would be written with three different colours (one for each syllable) and 'broken up' in this way (the gaps are only there for the example and students should be taught to write the whole word, using the different colours for the syllables).

Resources to Support Phonological Development

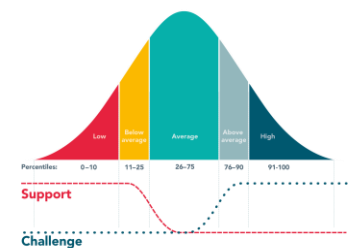
Students should be reminded of the correct 'pure' pronunciations for the phonemes used in English and opportunities provided for them to over-learn them, this will aid both the development of reading and spelling.

Two You Tube videos are available that show the pure phonic sounds, these can be accessed at:

- https://www.youtube.com/watch?v=BqhXUW_v-1s (this lasts for about 1 minute), or
- <https://www.youtube.com/watch?v=IwJx1NSineE> (This lasts for nearly 5 minutes but contains fuller explanations).

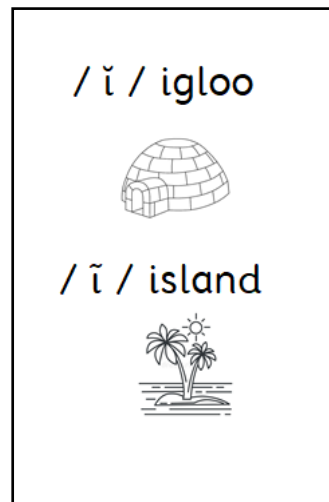
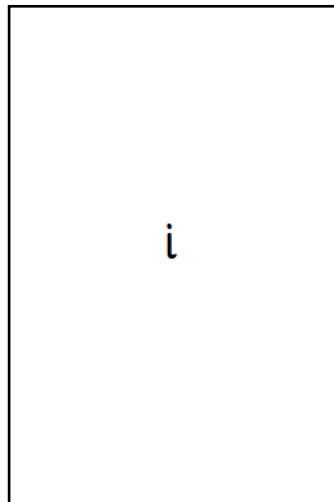
The Kelly and Phillips book: 'Teaching Literacy to Learners with Dyslexia', follows a similar format to Letters and Sounds, but suggests a number of supporting resources and also highlights the importance of memory strategies. Further information can be found at:

- <https://uk.sagepub.com/en-gb/eur/teaching-literacy-to-learners-with-dyslexia/book245740>



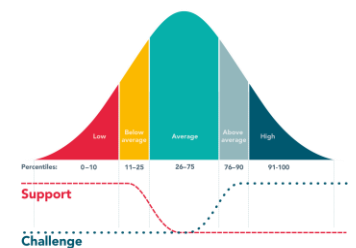
Each new phoneme is introduced through 'Discovery Learning' and reinforced through the senses. For example: the letter could be written and then tracked by the student, saying the letter sound/name, or wooden letters could be placed in a 'feely' bag and the learner asked to find the letter /i/. A mirror could also be used to show the learner how the sound is made. Students are encouraged to make reading and spelling cards for each new sound learnt. Examples are shown below:

Reading card example for the vowel /i/

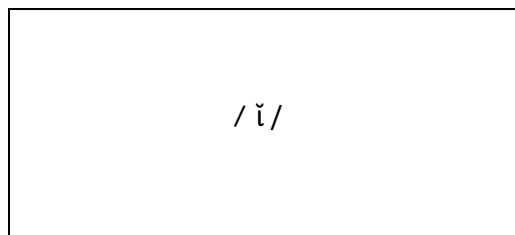


Reading Card Routine

The learner looks at the front of the card and responds with the letter sound and clue word. They turn the card over and self-check by looking at the picture/s drawn on the back.



Spelling Card



	B	M	E
/ĩ/	ĩ	ĩ	

Demonstrate how to write the letter and practise joining it to other letters.

Spelling Card Routine – short and long vowel

Short vowel

The adult says the sound on the front of the card /ĩ/; the learner repeats it and then gives the letter name. They then write it down in the position it can be found in words saying /ĩ/ ‘i’ at the beginning, /ĩ/ ‘i’ in the middle.

Long vowel

A second card should be made for the long vowel sound. The learner’s response for this card is /ĩ/ ‘i’ at the beginning, , /ĩ/ ‘i’ in the middle.

Helping to Recall Spelling Patterns and for Sticky Tricky Words

To support children in recalling alternative reading and spelling patterns for different phonemes or for recalling Sticky Tricky words, cards (similar to those made for the reading pack), can be created. For alternative spelling patterns, ‘silly sentences’ with associated spellings can be created. It is useful to do these on a different coloured card than the reading or spelling cards, such as green. An example could be: ‘The **toy** garg**oyle**.’ This is to reinforce



the /oy/ spelling pattern. For the Sticky Tricky words, cards can be made to support overlearning of these, using mnemonics linked to a picture. An example here, could be the mnemonic ‘Sally Ann Is Dizzy’, for the spelling of ‘said’. As with the other cards, these are most useful if created with the child/group of children.

Beginning, Middle and End

To support phonological understanding students should be encouraged to think about where different sounds appear within words. BME cards can be laid out on the floor/table/corners of the room and the instructor gives a ‘target’ phoneme, then says a word containing this, can the students place the phoneme correctly?

Beat Dyslexia Books 1-5

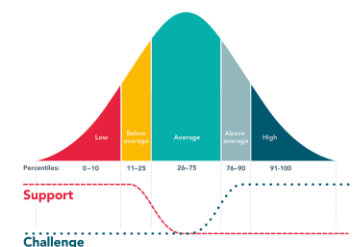
This is a step-by-step multi-sensory literacy programme developed for dyslexic students. There are 5 books in total. Each book includes a colour card pack and an audio CD. This programme is structured to use a variety of approaches and allows for small steps of progress. Each book contains between 50 and 80 photocopiable worksheets, teacher’s notes, photocopiable reference sheets and card packs. These can be used as supporting resources for the Lexplore Intensive levels, should there be a requirement to further embed students learning and retention. Books can be obtained from for example:

- <https://www.ldlearning.com/product/cognition-and-learning/dyslexia-and-literacy/beat-dyslexia/beat-dyslexia-pack-of-5/admt11482>

Multisensory Learning

All learning happens through the senses, which act as pathways to the brain. Multisensory methods utilise all the available senses simultaneously. This can be summed up in the phrase ‘hear it, say it, see it and write it’.

The primary pathways the brain are:



- Auditory – through the sense of hearing
- Visual – through the sense of sight
- Tactile – through the sense of touch
- Kinaesthetic – through body movement

A true multisensory lesson will engage students on all these levels, at one time and should be active and interactive. Employing as many senses as possible, simultaneously, will aid automaticity and speed of retrieval by enabling each mode of information to be stored in its specific location in the brain while establishing links between them. Multisensory teaching therefore supports the transfer of information from the Short-Term to the Long-Term memory.

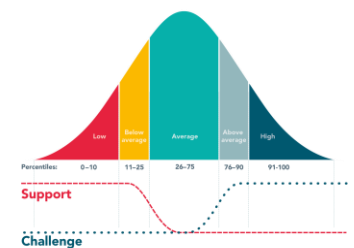
There are many multisensory techniques which can be employed to aid the student's learning, far too many to cover here. However, the following may be helpful in cementing the student's phonological knowledge and aid their long term retention and retrieval.

Writing using a variety of media

This activity allows the student to use sight, touch and sound to connect phonemes to their sounds. For example, students start with a handful of glitter on a painting tray. They then spread out the glitter and use their finger to write a phoneme or word in it. As they write, the student will say the sound each phoneme makes. If a word, they then blend those sounds together and read the whole word.

Air Writing

Air writing (also called sky writing) reinforces the sound each phoneme makes through “muscle memory.” It can also help reinforce commonly confused letter forms like /b/ and /d/. Students use two fingers as a pointer (keeping elbows and wrists straight) to write phonemes in the air. They say the sound each phoneme makes as they write it. Students should be encouraged to imagine the phoneme as they write it and can also pretend they are writing each sound in a different colour.



Sandpaper Letters

Letters cut out of sandpaper can help students to retain a tactile (touch) memory of phonemes and their sounds. Students trace each letter with their fingers while saying the sound of the phoneme out loud. They can feel the shape of the letters as they write. ‘Squidgy’ letters can also be purchased for this purpose, such as those found from a number of retailers, for example at:

- <https://www.tts-group.co.uk/squidgy-sparkle-transparent-gel-alphabet-letters/1002025.html>

Students can also be encouraged to arrange sandpaper letters on a table to spell out words. An extension to this activity is to place a piece of paper on top and colour over the letters like a ‘rubbing’.

Play dough or modelling clay or pipe cleaners can also be used by the student to create letters and phonemes in a similar way.

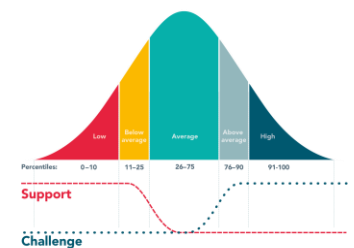
Word Building

Students can build words using wooden, magnetic or pebble letters. Often these have vowels in one colour and consonants in another. Students say each of the phonemes as they lay them on a table and when they have built the word, then read it aloud. Pebbles are particularly appealing to older students and are very tactile. These can be found from a number of retailers, such as:

- <https://www.ypo.co.uk/product/detail/education-and-learning/curriculum/878162>

Reading and Spelling Card Routines

The routines outlined above can also be used as a multisensory method of learning, as the student writes the word, reads the word and hears it, all at the same time.



Paper-Chains

The student creates loops, each with a different phoneme written on it and can use these to blend phonemes together to make word chains. These can later be used to create sentences using the words they have learnt too.

Metacognition - Learning How to Learn

Definition:

‘Cognition’: the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses.

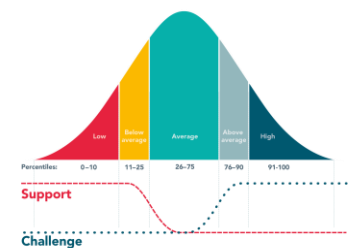
‘Meta’: referring to itself; denoting something of a higher or second-order kind.

‘Metacognition’: awareness and understanding of one’s own actions and thought processes; requiring reflection and self-regulation.

Put very simply, metacognition is ‘learning how to learn’, building the tool kit of resources a student can draw upon to support learning.

There are 2 main elements of metacognition: **recognition**, noticing our own thinking and **regulation**, doing something with it

Metacognition helps students think about their own learning more explicitly, often by teaching them specific strategies for planning, monitoring and evaluating their learning. Students are encouraged to develop a repertoire of strategies to choose from and the skills to select the most suitable strategy for a given learning task. It is essential that when supporting students, we also know their learning preferences and use a variety of different techniques to enhance their learning.



Appendices

Appendix 1: Sample Reception Lesson Plan

RECEPTION EXAMPLE LESSON PLAN

Lesson objective and success criteria

To learn GPC for /g/, /o/, /c/, /k/

Revisit and rehearse

Sing 'Alphabet Rap', relating to the frieze displayed in the classroom/on the Smartboard

Practise previously learnt phonemes – /s/, /a/, /t/, /p/, /i/, /n/, /m/ and /d/. Play 'silly soup'. Children are shown flashcards of phonemes and then asked to choose the correct item beginning with the same phoneme, to be added as 'ingredients' to the soup.

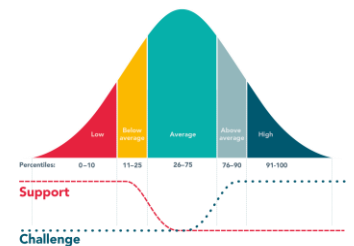
Practise oral blending and segmentation. Range of words from the nonsense words on page 6 (Student Red Level) or page 9 (Instructor Red Level) and small selection of real words using these phonemes. Teacher or child led.

Teach

New phonemes /g/, /o/, /c/, and /k/ introduced through discovery learning. Pictures of items beginning with the appropriate phonemes are placed around the classroom for the children to match.

Practise blending and segmenting with these letters, using 'robot' arms. Teacher or child led.

Teach two new 'Sticky Tricky' words (page 34 of Student Red Level and page 38 of the Instructor Red Level): 'go' and 'as'.



Practise

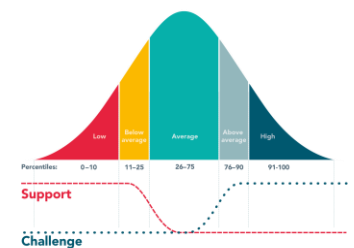
Precision teaching of phonemes not previously embedded * and new phonemes page 7 (Student Red Level) or page 10 (Instructor Red Level).

Practice reading and/or spelling words with the new phonemes – teacher and children to generate a small number of real and nonsense words containing previous learnt phonemes and short captions.

Apply

Read or write words, with the teacher, using previously learnt phonemes and one or more of the ‘Sticky Tricky’ words.

* Using precision teaching, the child (small number of children) will alternate each day between reading down the columns or across the rows. The teacher marks in the instructor manual which phonemes are correctly recognised. Three consecutive marks indicate when the phoneme is embedded in the long-term memory store.



Appendix 2: Sample Year 1 Lesson Plan

YEAR 1 EXAMPLE LESSON PLAN

Lesson objective and success criteria

To learn GPC for /ar/, /or/, /ur/, /ow/ and /oi/

Revisit and rehearse

Sing 'Alphabet Rap', relating to the frieze displayed in the classroom/on the Smartboard

Practise previously learnt phonemes – PowerPoint of all previously learnt phonemes (timed – can we beat our best time?) – Pure phonemes

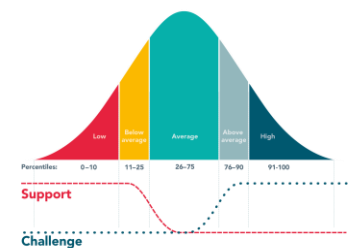
Practise oral blending and segmentation. Range of words from the nonsense words on page 7 (Student Yellow Level) or page 12 (Instructor Yellow Level) and small selection of real words using these phonemes. Teacher or child led.

Teach

New phonemes /ar/, /or/, /ur/, /ow/ and /oi/ introduced through discovery learning. 'What's in the box?' activity. Today a range of pictures and words are in the box, what's the link?

Large flashcards of above phonemes, beginning, middle and end activity, where do the new phonemes appear in our words?

Practise blending and segmenting with these letters, using 'robot' arms. Teacher or child led.



Teach two new 'Sticky Tricky' words (page 42 of Student Yellow Level and page 49 of the Instructor Yellow Level): 'down' and 'children'.

Practise

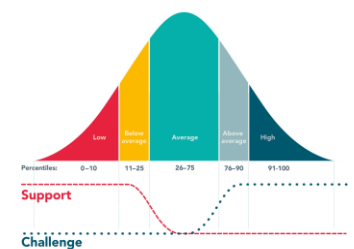
Precision teaching of phonemes not previously embedded * and new phonemes page 9 (Student Yellow Level) or page 14 (Instructor Yellow Level).

Practise reading and/or spelling words with the new phonemes – teacher and children to generate a small number of real and nonsense words containing previous learnt phonemes and short captions.

Apply

Read or write a short sentence, with the teacher using previously learnt phonemes and one or more of the 'Sticky Tricky' words.

* Using precision teaching, the child (small number of children) will alternate each day between reading down the columns or across the rows. The teacher marks in the instructor manual which phonemes are correctly recognised. Three consecutive marks indicate when the phoneme is embedded in the long-term memory store.



Appendix 3: Sample Year 2 Lesson Plan

YEAR 2 – EXAMPLE LESSON PLAN

Lesson objective and success criteria

To understand that compound words are composed of two separate words that combine to make a new word.

Revisit and rehearse

Play ‘I went to market’, alphabetical order.

Practise previously learnt phonemes – PowerPoint of all previously learnt phonemes / words containing these (timed – can we beat our best time?)

Practise oral blending and segmentation. Reading more complex sentences containing previously learnt phonemes.

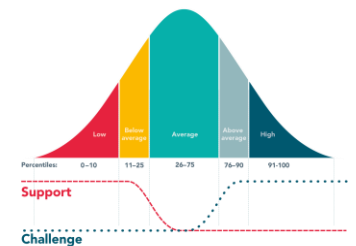
Teach

Compound words from page 5 (Student Turquoise Level) and page 10 (Instructor Turquoise Level). Five of these words broken down into the two words that make them up, can the children work out which five compound words they can make from the 10 components?

Teach two new ‘Sticky Tricky’ words (page 42 of Student Turquoise Level and page 49 of the Instructor Turquoise Level): ‘address’ and ‘minute’.

Practise

Precision teaching of phonemes not previously embedded * and new compound words page 5 (Student Turquoise Level) or page 10 (Instructor Turquoise Level).



Practise reading and/or spelling words - to assess understanding of the compound words, generate three sentences containing some of these – model one and others independently.

Apply

‘True and False game’ – after modelling, the children will generate two sentences, containing today’s ‘Sticky Tricky’ words and a compound word, to show to others in the group. One sentence will be true and the other false.

* Using precision teaching, the child (small number of children) will alternate each day between reading down the columns or across the rows. The teacher marks in the instructor manual which phonemes are correctly recognised. Three consecutive marks indicate when the phoneme is embedded in the long-term memory store.

