

# Resource pack

## For Professionals Working with Children and Young People with Special Educational Needs

This resource pack includes a range of topics to help support you in your work with children and young people with special educational needs.

The resource material list is set out below. **Just click on any of them to go straight to that page.** If you wish to return here just click the **HOME** button.

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# Expressive Language

## The language used for communication

Children and young people may have difficulty with:

- **vocabulary**; the collection of words the child is able to recall and use despite understanding them (word-finding)
- **syntax**; the rules for assembling words into meaningful sentences
- **grammar**; the rules dictating:
  - how we combine sentences and longer strings of language
  - the parts of language we use to change meanings e.g. plurals and tenses
  - the order of words in sentences so they make sense

### Thoughts/considerations

Much of the assessment that happens in classrooms is through the use of spoken and written language.

Pupils may have difficulties with:

- speaking fluently with few hesitations
- using long/complex sentences
- telling others what to do
- conveying verbal messages
- describing a sequence of events in reasonable order
- retelling stories
- using language to reason, compare and classify, and explain cause and effect

### Strategies/resources/programmes of work

Model speech and language when errors are made (do not ask child to repeat the corrected model)

Consider positioning of child in class/on carpet

Support the ability to formulate sentences using subject/verb/object information

Pre-teach topic vocabulary

Develop narrative skills

Support sentence structure; use prompts of 'who?' 'where?' 'when?' and 'what happened?'

Teach grammar rules

# Expressive Language

## The language used for communication

Children and young people may have difficulty with:

- **vocabulary**; the collection of words the child is able to understand
- **semantics**; the meaning of words and phrases
- **syntax**; the rules for assembling words into meaningful sentences

- **grammar**; the rules dictating
  - how we combine sentences and longer strings of language
  - the parts of language we use to change meanings e.g. plurals and tenses
  - the order of words in sentences so they make sense
  - inference and deduction; making sense of information at text level

### Thoughts/considerations

Much of the assessment that happens in classrooms is through the use of spoken and written language.

Pupils may have difficulties with:

- speaking fluently with few hesitations
- using long/complex sentences
- using a range of connectives
- using detail to tell others what to do
- conveying and explaining verbal messages
- describing a sequence of events with clarity and detail
- summarising books and films
- using language to reason, compare and classify, and explain cause and effect

### Strategies/resources/programmes of work

Model speech and language when errors are made  
(do not ask young person to repeat the corrected model)

Consider positioning of young person in class/on carpet

Support the ability to formulate grammatically correct sentences

Pre-teach topic vocabulary associated with 'instruction' and 'thinking' words

Develop narrative skills

Support sentence structure; use prompts of 'who?' 'where?' 'when?' and 'what happened?'

Teach grammar rules

# Receptive Language

## The understanding and comprehension of spoken and written language

Children and young people may have difficulty with:

- **vocabulary**; the collection of words the child is able to understand
- **semantics**; the meaning of words and phrases
- **syntax**; the rules for assembling words into meaningful sentences
- **grammar**; the rules dictating
  - how we combine sentences and longer strings of language
  - the parts of language we use to change meanings e.g. plurals and tenses
  - the order of words in sentences so they make sense
- **inference and deduction**; making sense of information at text level

### Thoughts/considerations

Much of the teaching that happens in classrooms is through the use of spoken and written language. This relies on pupils being able to understand individual words, sentences and narratives.

Pupils may have difficulties with:

- following instructions
- responding appropriately to questions
- maintaining attention and active listening
- understanding stories and texts read aloud
- following directions involving spatial vocabulary
- understanding topic vocabulary
- completing tasks independently within a given time
- comprehension tasks
- mental maths
- problem solving

*Continued overleaf*

### Strategies/resources/programmes of work

#### Modify the communication style

Use child's name before making a request or giving an instruction

Simplify spoken language, and make sure that information has been understood

- Repeat instructions
- Provide instructions individually
- Deliver information in 'chunks' rather than in a single utterance
- Pause between utterances to allow time to process information

Pre warn pupil of questions

Check understanding through questioning and child recapping information

Encourage them to tell you when they do not understand

#### Adapt the environment

Consider positioning of child in class/carpet.

Use visual, practical teaching approach approaches:

- task management board to break down tasks into manageable steps
- display objects, pictures and key words
- use a digital camera/tablet to record activities and to provide visual prompts
- Use recordable devices such a sound buttons; the child can process the spoken language at their own pace while retaining independence
- Use sound buttons alongside a task management board or visual prompts

#### Consider the curriculum

Pre-teach topic vocabulary

Teach the meaning of question words

Identify underlying concepts within activity

# Receptive Language

## The understanding and comprehension of spoken and written language

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- **vocabulary**; the collection of words the child is able to understand
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  - how we combine sentences and longer strings of language
  - the parts of language we use to change meanings e.g. plurals and tenses
  - the order of words in sentences so they make sense
- **inference and deduction**; making sense of information at text level
- **idioms and sarcasm**

### Thoughts/considerations

Much of the teaching that happens in classrooms is through the use of spoken and written language. This relies on pupils being able to understand individual words, sentences and narratives.

Pupils may have difficulties with:

- following instructions
- responding appropriately to questions
- maintaining attention and active listening
- understanding stories and texts read aloud
- following directions involving spatial vocabulary
- understanding topic vocabulary
- completing tasks independently within a given time
- comprehension tasks
- mental maths
- problem solving
- understanding idioms and sarcasm
- inferring meaning
- engaging with tasks confidently

*Continued overleaf*

# The understanding and comprehension of spoken and written language *continued*

### Strategies/resources/programmes of work

#### Modify the communication style

Use child's name before making a request or giving an instruction

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- Repeat instructions
- Provide instructions individually
- Deliver information in 'chunks' rather than in a single utterance
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#### Consider the curriculum

Pre-teach topic vocabulary

Teach the meaning of question words

Identify underlying concepts within activity

# Vocabulary

## The collection of words the child is able to understand and/or use

Children and young people may have difficulty with:

- subject specific vocabulary (including maths, science, history)
- higher level inference and deduction
- interpretation of instructions
- labelling of emotions
- responding to questions or directions (delayed)
- interpretation of language (may interpret language literally)
- reading
- understanding words with multiple meanings

### Thoughts/considerations

**Pupils may have difficulty with:**

- behaviour; becoming withdraw or disruptive to deflect attention from the problem
- listening and attention

**Pupils may:**

- use empty non-specific language such as 'thingy'
- use a related word or talk around a target word
- use gesture/visual prompts to show the item rather than use word
- need extra time to retrieve a word
- pause, hesitate, or show dysfluency
- know the word but can't remember its name- 'tip of the tongue'
- use short phrases/simple vocabulary

### Strategies/resources/programmes of work

- name everyday resources, labels, actions, emotions and concepts as they occur
- teach the vocabulary used in subjects; labels, displays and key questions
- reinforce vocabulary within texts
- sort real objects, photos, and pictures into different categories
- use vocabulary maps

**Reinforce knowledge of topic vocabulary by providing opportunities for pre-tutoring of vocabulary and reinforcement in class.**

- Sort and categorise words
- Find all the items that belong to a group
- Find the odd one out
- Explain the similarities and differences between words

# Vocabulary

### The collection of words the child is able to understand and/or use

#### Young people may have difficulty with:

- subject specific vocabulary (including maths, science, history)
- vocabulary of 'instruction' and 'thinking'
- higher level inference and deduction
- interpretation of instructions
- labelling of emotions
- responding to questions or directions (delayed)
- interpretation of language (may interpret language literally)
- reading
- understanding words with multiple meanings
- switching between formal and informal language

#### Thoughts/considerations

##### Pupils may have difficulty with:

- behaviour; becoming withdraw or disruptive to deflect attention from the problem
- self-esteem; lacking confidence to actively engage
- independence: unable or unwilling to attempt or compete tasks independently
- listening and attention
- using vocabulary appropriate to the situation

##### Pupils may:

- use empty non-specific language such as 'thingy'
- use a related word or talk around a target word
- use gesture/visual prompts to show the item rather than use word
- need extra time to retrieve a word
- pause, hesitate, or show dysfluency
- know the word but can't remember its name- 'tip of the tongue'
- use short phrases, simple or inappropriate vocabulary

#### Strategies/resources/programmes of work

- name everyday resources, labels, actions, emotions and concepts as they occur
- teach the vocabulary used in subjects; labels, displays and key questions
- reinforce vocabulary within texts
- sort vocabulary into different categories
- use vocabulary maps

##### Reinforce knowledge of topic vocabulary for 'instruction' and 'thinking' by providing opportunities for pre-tutoring of vocabulary and reinforcement in class.

- Sort and categorise words
- Find all the items that belong to a group
- Find the odd one out
- Explain the similarities and differences between words

# Spelling: High frequency words

Children and young people may have difficulty with:

- The consistent recall of common high frequency words which are irregular / not phonically based.
- Application of their knowledge of high frequency word spelling in their own independent writing
- Inaccurate copying of words

## Thoughts/considerations

**Pupils may have difficulty with:**

- Weak visual memory for symbols/sequence of symbols (ie letters)

**Considerations:**

- Pupils may be resistant to 'usual' classroom approaches (which are often visual) and require a multi-sensory approach to support weaker channels (pupils may have weaknesses with visual and or auditory memory)
- Ensure that the pupil can read the word/s they are expected to spell.
- It doesn't necessarily follow that if the words can be read, then they can be spelled accurately.
- Consistent and regular record keeping to measure the small steps of progress is essential

## Strategies/resources/programmes of work

- REGULAR practise / rehearsal / over-learning
- VAK MULTI-SENSORY TEACHING  
Such as:
  - S.O.S (simultaneous oral spelling) method
  - Mnemonics
  - Visualisation
  - Use of wooden/plastic /tactile letters to create words
- Link like spelling patterns
- Highlight the tricky parts of the words especially the visually similar words
- Encourage joined script to aid motor memory of taught spelling

# Reading: High frequency words

Children and young people may have difficulty with;

- Immediate visual recall of words (may tend to decode)
- Confusion between visually similar words (e.g. a/an, of/for, for/from)
- Directionality and left to right tracking (b/d/, p/b, was/saw)
- Inconsistent recognition of words (may recognise word at start of paragraph and not at end and vice versa)

## Thoughts/considerations

**Pupils may have difficulty with:**

- Weak visual memory for symbols / sequence of symbols (i.e. letters)

**Considerations:**

- Pupils require a multi-sensory approach to support weaker channels.
- Many high frequency words are 'abstract' therefore pupils may find it difficult to link a visual image/picture to an abstract words such as 'the'
- Consistent and regular record keeping to measure the small steps of progress is essential

## Strategies/resources/programmes of work

- Limit the number of words to be learnt
- REGULAR practise / rehearsal / overlearning use
  - Flipper / flashcards / 'key word kids' / 'see say reading probes' sheets
- MULTI-SENSORY TEACHING
- Tracking and saying words
- Word-shape
- Highlight the tricky parts of the words especially the visually similar words
- Read words in context
- Link like patterns (e.g. me, he, she, we, be)

# Phonic knowledge: High frequency words

Children and young people may have difficulty with;

- Retention of phonic patterns
- Identification of the correct spelling choice / letter patterns
- Applying knowledge to independent reading and spelling
- Writing letter pattern in the correct sequence within words (rain – rian/night – nihgt)

## Thoughts/considerations

### Considerations:

- Consistent and regular record keeping to measure the small steps of progress is essential.
- Can the pupil orally blend 3/4/5 phonemes?
- Ensure that the pupil can segment the word orally before spelling.
- Limit the number of graphemes and spelling patterns to be taught

## Strategies/resources/programmes of work

### MULTI-SENSORY TEACHING

- Tracking grapheme and saying phoneme
- Create words practically with tactile letters
- Sound cards
- Match words to pictures and create a 'sound story'
- Learn patterns in isolation, within words and word within context.
- Develop links between the graphemes / phonemes and pictures to assist memory (visualisation)
- Teach spelling rules

# Listening and attention

## The ability to focus and control attention across different situations with different people

- Listening**
- sitting still
  - looking
  - thinking
  - taking their turn

- Attention**
- concentrating on a task of another's choice
  - 'doing' and listening at the same time
  - concentrating for increasing lengths of time
  - concentrating in different situations
  - concentrating with different people

### Thoughts/considerations

There are specific stages of listening and attention which children move through as they develop

Skills may need to be explicitly taught

Poor listening and attention will impact across the curriculum

### Strategies/resources/programmes of work

#### Modify the communication style

- gain the child's attention, for example saying their name before giving an instruction
- use appropriate language
- check information has been understood

#### Adapt the environment

- reduce background noise and distractions
- provide visual support such as pictures and objects

#### Consider the curriculum

- keep activities short
- teach good listening skills
- reinforce skills and provide specific praise
- use multi-sensory methods
- make use of technology

# Good Practice for Pupils with Autism Spectrum Condition

## Pupil

- Talk to the pupil e.g. on strengths, interests, needs, emotional well-being and seek their views regularly (AET\* pp 16-20)
- Talk to parents/carers and share knowledge and understanding of the pupil (AET pp22-24)
- Talk to previous staff/setting about positive approaches and strategies and increase understanding further (AET pp22-24)

## School Day

- Use an age-appropriate visual timetable
- Prepare the pupil for changes
- Use relevant and meaningful visual supports throughout the day (AET pp25-28)

## Communication

- Teach and support pupil to develop and use an effective communication system
- Keep language simple and avoid ambiguity, especially in instructions
- Allow time to process information
- Model what is expected, provide '*finished products*' and use visual prompts
- Introduce new vocabulary prior to a new topic (AET pp16-20).

## Reducing Anxiety and Stress

- Talk to the pupil regularly about all aspects of school
- Provide a visual timetable and relevant and meaningful visual prompts
- Prepare thoroughly for change
- Reduce sensory '*overload*' and provide '*sensory breaks*'
- Teach relaxation techniques (AET pp16-20)

## Environment

- Minimise sensory challenges/overload e.g. lighting, seating, sound from electronic equipment
- Define spaces/areas clearly
- Encourage independence through organisation and labelling of resources
- Provide an area for quiet times, when necessary (AET pp29-31)

## Tasks

- Match presentation of tasks to learning style e.g. visual, kinaesthetic
- Break tasks into smaller '*chunks*'
- Use relevant and meaningful visual supports to clarify expectations and promote independence
- Ensure support staff promote independence (AET pp25-28)

## Social Interaction

- Provide opportunities for working alongside good role models
- Timetable supported, structured, small group activities and games
- Use whole class opportunities to discuss and role play positive social interaction
- Provide support where collaboration and negotiation are required (AET pp21-24)

## Strengths and Interests

- Discuss strengths and special interests with the pupil and use these to motivate
- Use a '*First...then*' approach where a less-favoured activity is followed by a preferred activity (AET p16-20)

## MORE INFORMATION

\* The National Autism Standards for Schools and Educational Settings published by the Autism Education Trust are available online:

<http://www.aetraininghubs.org.uk/schools/national-autism-standards/>

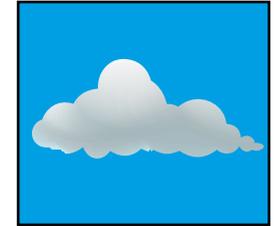
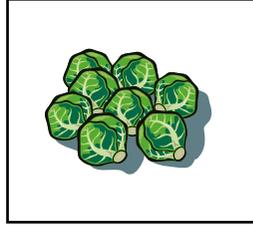
For further advice and individual recommendations please contact the High Incidence Needs Team (HINT):

0191 433 8513, email: [SENITsupportteam@gateshead.gov.uk](mailto:SENITsupportteam@gateshead.gov.uk)  
SENIT Business Support Team, Gateshead Council,  
Dryden Centre, Evistones Road, Gateshead, NE9 5UR

# Sound Stories: Introducing new sounds through a sound story

## Pictures

Select up to 8 pictures and/or objects which clearly represent the sound to be introduced – examples given below.



All of the work covered in this introduction section is oral.

The adult, by using careful questioning skills, allows the child to identify the correct words to match each picture.

When repeating the target words the child then isolates the sound which they can hear in each word, thereby identifying the new sound which they are about to learn. Research indicates that if a child discovers things for themselves they are more likely to retain that information.

Use this opportunity to alert the child to the physical production of the sound and discuss the shape of the mouth, lips, any effect on the nose and the position of the tongue. It helps the child to register what is happening and also promotes good modelling if they look in a mirror whilst making the sound.

## Sound Stories

Using the target words, ideas are shared to make up a short story (work continues to be oral).

Children are selected to hold each picture. A volunteer in the class recites the story slowly and clearly. When each target word is mentioned the child holding the relevant picture stands in front of the class whilst all of the remaining children stand in the correct sequence when they hear their word spoken. The story is rehearsed so that they are able to retain the words and hopefully in the future be able to recall the story and associate the words with the appropriate sound and spelling.

Children could record their own stories orally by using the record button on the iPad - for example:

***It was a cloudy day but the man still wanted to climb the mountain. He went on his way but heard a man shout, it was very loud. 'Help me! I don't like the mouse!' The mouse was just sitting there eating a sprout. 'Don't worry, I will look after you' said the man. The mouse ran away. 'Look!' said the man, it is your lucky day. The mouse was sitting on a pound.***

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## Tracking

This is a multisensory strategy. The principle of the activity is to teach scanning a line of print to improve reading, word, sound recognition and discrimination skills.

It is beneficial to initially complete the activity using the index finger before actually putting pen to paper to paper. This is a means by which the child is given the opportunity to practise, rehearse and consolidate the tracking exercise.

To complete a tracking exercise the child places their pencil at the left of the line. They then draw a line (just like a railway track) under the row circling the appropriate letter/sound word as they locate it. Each time the item is 'captured' the child must say it out loud. Only when they reach the end of the page are they allowed to lift the pencil off the page. Once the child is familiar with the routine it can be carried out at an independent level.

**Example of a tracking exercise: Track the (ou) sound in every line:**

ou ir ch ow ou er sh ea ou ou ee ou oa ow ou th ur ou ou sh ea ou ou ee ou oa ow ou th ur ou ou ch ea ou ir sh ow



## Pelmanism

This is a matching game where any two combinations can be matched using visual perceptual skills i.e. picture/picture, word/word, word/picture, word/sound etc. Time needs to be spent training the child in how to set up the game i.e. two sets of colours one on the left one on the right, ordered in precise rows and columns. It is very important that when the cards are turned over they are left face up (one card from the left and one card from the right) so that what is on the card and their position can be memorised for the next turn (if the cards do not match). The object of the game is to collect as many matching pairs as possible.

**Example of a pelamism exercise:**



## Dictation

Draw the word/sound in the air with your finger, on the table, and the palm of your hand (saying it out loud every time) to rehearse, practise and consolidate.

Then only using words and sounds that the child is already familiar with dictate a sentence also incorporating the focus word and or sound.

For example: ***The man took a pound and went to the shop to get some sprouts. 'What is this?' he said loudly, 'a mouse eating my sprouts!' I could not see the top of the mountain because it was so cloudy. But, I could hear a woman shouting very loudly.***

Dictation is a well-established means of practising, evaluating and monitoring what a child has learnt and retained.

# Phonological awareness and processing

Phonological awareness allows a child to attend to, discriminate, remember and manipulate sounds at the sentence, word, syllable and phoneme level.

- Phonemic awareness is an awareness that words have a unique sequence of sounds. It is also the ability to hear what these sounds are.

- Phonological processing is an ability to work with/manipulate the sounds identified within words, e.g. to see similarities and differences between pairs and sets of words or to swap, add or take away sounds within words e.g. knowing how to change cat into cast or knowing that if you can spell sing you are also likely to be able to spell thing.

PHONOLOGICAL AWARENESS IS NECESSARY FOR READING AT WORD LEVEL AND FOR SPELLING.

## Thoughts/considerations

Children with poor phonological awareness may have difficulties with production of words, as well as reading and spelling as they fail to hear and retain the sequence of sounds in new words, e.g. saying "rinomerus" instead of "rhinoceros".

- Difficulties with phonological awareness and processing are thought to have a significant impact on literacy difficulties at word level, but they can be developed.
- Difficulties can be identified in children who find it hard to:
  - identify syllables i.e. syllable clapping of children's names
  - blend syllables e.g. trac-tor
  - identify if pairs of sounds or words are 'the same' or 'not the same'
  - identify alliteration and rhyme e.g. which two words sound the same at the beginning- bat, sat, sun? Which two words rhyme - cake, hike, bake?
  - generate alliteration and rhyme e.g. how many words can you think of that start with an a? what also starts with an a sound? What rhymes with chip?

## Strategies/resources/programmes of work

The following resources may support development of phonological awareness and processing in young people:

**Letters and Sounds** [www.smartkids.co.uk](http://www.smartkids.co.uk)

**Learning can be Fun** (Syllable Division for word attack skills) - Suzanne Briggs, Egon publishers.

**Syllable counting** clapping, using instruments, finger counting, 'chin' method.

**Syllable frames A4 and A3** [www.sparklebox.co.uk](http://www.sparklebox.co.uk)

**Variety of pictures and activities to represent words of 1 – 5 syllables:** [www.twinkl.co.uk](http://www.twinkl.co.uk)

**Phonemic awareness (Rhyme)** Early Years PA3 and PA4 Black Sheep Press.

**Silly bulls** Syllable board game devised by Anne Mellor. Philip and Tacey Ltd – Philigraph Publications Ltd.

**J. Rosner Test of Auditory Analysis Skills (TAAS)** test consists of 15 items.

The outcome determines which level (1 – 4) the student needs to follow in the programme of work.

**Rhyming Bingo** [www.smartkids.co.uk](http://www.smartkids.co.uk)

**Rhyme Lotto** [www.LDAlearning.com](http://www.LDAlearning.com)

**Rhymenoceros and Silly Soup** [juniorlearning.co.uk](http://juniorlearning.co.uk)

**Earobics** (United States) by Houghton Mifflin Harcourt. This is a software programme which helps students who are lacking phonological awareness and the ability to notice and manipulate sounds in words. It is an adaptive research based reading intervention programme. Resources available on eBay.

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## Thoughts/considerations *continued*

- phoneme segmentation- identify and order each of the sounds in the word e.g. identifying beginning, middle and end of a word
- blend phonemes to identify target word e.g. h-a-n-d
- delete syllables e.g. say rainbow, now say it again but don't say bow
- deleting phonemes, adding phonemes and substituting phonemes e.g. tab: take off the 't' and add 'l' is lab.

Difficulties often arise due to language difficulties, difficulties hearing or working memory difficulties.

- Children with phonological difficulties may well have good phonic knowledge, whole word recognition and spelling skills as they use their visual skills to good effect.
- It is helpful to ensure that young people get into good habits with enunciating sounds correctly i.e. "c" not "cu", and continuous blending i.e. no gaps in voice when sounding out, when they are decoding. Adults will need to model both of these things.
- Processing of visual information is often quicker than processing of auditory information so it will be beneficial to ensure that processing time is given and that information is repeated as necessary.
- A kinaesthetic and multisensory approach that makes links/ ties things together is often helpful e.g. Jolly Phonics would be one example of making a sound visual and physical. Action Words would be an example

## Strategies/resources/programmes of work *continued*

**Rhyme Time** – Dean and Howell [www.stasspublications.co.uk](http://www.stasspublications.co.uk)

**Rhyming dictionary** Oxford First Rhyming Dictionary by John Foster, OUP.

**Alphabet Arc** to visually demonstrate the concept of rhyme production.

**Onset – Rime** window resources.

**Link between speech and text made explicit** (Appendix One- point 8).

**Phoneme frame A4 and A3** [www.sparklebox.co.uk](http://www.sparklebox.co.uk)

**Phoneme Awareness Made Easy (Phame)** - McManus, Parkes and Bell, Stass Publications Ltd.

**Sound boxes (tubs), objects to identify sounds.**

**Sorting a range of objects/pictures into hoops and/or boxes.**

**Sound Stories** to illustrate a particular sound (Appendix Two).

**Sparkle Box sound mats.**

**Hairy Phonics**

**Gradual reveal activities** – phonically regular word on card, reveal word bit by bit by drawing a second piece of card over it from left to right.

**Sound bar chart** - follows the same principle as a maths bar chart. Label the x axis with 2 - 4 different sounds. Child listens to word (identifies the sound) and places counter in the appropriate column.

**Spell Checker** for personal use in the classroom.

**Personalised spelling/reading pack or phonic knowledge reference book**

**Phonics International Ltd sound charts** for personal reference (visual prompt on desk)  
[www.phonicsinternational.co.uk](http://www.phonicsinternational.co.uk)

# Working memory

## Working memory

Working memory is distinctly different to short or long term memory. It is what we use when we have to hold onto information briefly (for only a few seconds), in active memory, so that we can perform a task with it. Many tasks put a load on working memory but those that particularly require working memory include:

- Mental arithmetic.
- Rehearsing pin / telephone numbers given to us orally whilst we write them down or dial the number.
- Reading and at the same time taking meaning from what we read.
- Following/ acting upon spoken instructions, e.g. messages to the school office, a set of classroom instructions.

Working memory is a mental workspace that is limited in capacity and subject to catastrophic loss, whereby the information is permanently lost. A person must pay attention to the information and continue to pay attention until the task is done, avoid intrusive thoughts and block out distractions and avoid giving themselves too much to do at any one time.

Listening and attention and memory are interlinked and can have a significant impact on one another e.g. people who appear to have concentration difficulties may actually have the ability to pay (and sustain) attention but working memory difficulties prevent them being able to hold on to and process the information to then complete the task.

### Thoughts / considerations

- Working memory ability increases steadily with age between 4 and 14 years and there are huge differences in working memory ability between children of the same age.
- Working memory ability is important because it is closely associated with the ability to learn and therefore with academic attainment. Working memory skills are considered good predictors of Maths and English attainments in Year 2. More than 80% of children with poor working memory fail to achieve expected levels of attainment in both reading and mathematics.
- Children with working memory difficulties frequently:
  - fail to follow instructions fully;
  - abandon tasks;

### Strategies / resources / programmes of work

Children with working memory problems require two sources of support.

#### (1) Classroom support:

- Be aware of warning signs of working memory failure and be proactive in preventing overload e.g. use alternate methods of recording such as dictaphones and iPads and make word banks available.
- Reduce working memory load in task, e.g. model, demonstrate and support spoken instruction with pictorial information or written information and leave it visible, give one instruction at a time and use as few words as is possible and/ or reduce repetition of instructions to key words.
- Repeat, and ask child to repeat, instructions and do this throughout the task. Ask specific questions about what has to be done, use Talking Partners as a planning tool.

## Working memory *continued*

- demonstrate place keeping errors, e.g. pausing, repeating, skipping, mis-ordering parts of a sequence;
- laboriously copy from sheets / board as they tackle one letter at a time.
- seem inattentive or easily distracted, when in fact they simply forget a step or steps in the process.
- Stress and anxiety can reduce working memory capability.

A few assessments have recently been developed in order to help teachers and other professionals identify children with possible working memory difficulties:

- Automated Working Memory Assessment (AWMA) Pearson Publishing.
- Working Memory Rating Scale (20 items) Pearson Publishing.

And also:

- Working Memory and Learning: A Practical Guide for Teachers Gathercole SE and Alloway TP (2008).

- Encourage clarification questions.
- It is acceptable for a student to ask for frequent repetition.
- Aim for mastery (fluency and automaticity) of the component parts of a task e.g. writing a sentence, in order to reduce the load on the mental workspace.
- Make maximum use of planning tools to enable the student to fully concentrate on each part of the task.
- Strive for structure and routine so that fewer bits of information need to be actively held in working memory and to minimise stress and anxiety.
- Alternate tasks that could overload working memory with those that do not to maximise the chances of success and minimise anxiety.
- Use concrete apparatus for longer.
- Use multisensory and kinaesthetic approaches.
- Encourage child's own jottings, pictures. Try Smart Art planning tool.
- Encourage the child, and model how, to paraphrase i.e. highlighting text on first read through, holding on to only important information.
- Use forewarned questions to support sifting and sorting of the information i.e. give question, give information, repeat question.
- Pre-teach vocabulary, concepts and processes one-to-one / small groups.
- Keep the need for copying to a minimum and try to encourage memory for whole words.

## Working memory *continued*

### (2) Working memory 'training':

- Teach the student to make maximum use of the capacity they have through explicitly teaching, and discussing the benefits of, strategies such as sub-vocal rehearsal, chunking and visualisation, and work on concentration.
- Use activities such as barrier games to practise strategies and work out what works for the young person.
- Try using memory development tools, e.g. Cogmed. Research into the effectiveness of 'training' is in the early stages. We don't yet know whether it simply trains attention and concentration, teaches the young person to make maximum use of their current capacity or actually improves the capacity itself.

**Please contact the SENIT Support Team, if you require any further information.**

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