St. Nicholas School Canterbury

Canterbury District
STLS & Outreach

ADVICE SHEET

Ways to help children with working memory difficulties in the classroom

To support children with working memory difficulties teachers need to:

Identify working memory demands - be able to assess the demands that different tasks place on pupils' working memory and recognise when a child is experiencing memory overloads.
Adapt teaching to reduce demands – be able to modify lesson structure and content accordingly
Provide memory aids & encourage meta-cognition – provide memory aids and help children to evaluate which aids work best for them and encourage them to get into the habit of using these independently

Identify working memory demands
Look out for the warning signs!

- Are they looking at partners work?
- Are they repeatedly asking for help?
- Are they confused?
- Have they abandoned the task?

If you spot any of these signs take action! Reduce the working memory overload. This should be an ongoing process which you continue to monitor. See below for suggestions.

Adapt teaching to reduce demands
Establish clear links to previous learning; consider using mind-maps, photographs – make it visual, don't just talk about it.

- Overview – always give an overview of what the lesson is about at the start of the lesson – keep it clear and simple and provide visual support – give them the "Big Picture" (WAGOLL, WILF, WALT)
- Think about how you will break the information/instructions down into shorter chunks and structure the lesson into short bursts – e.g. 10 minute talk, 10 minute activity, class recap, introduce next activity etc.
- Consider the working memory demands of the tasks set for children – plan how you will adapt tasks for children who can only hold 1 or 2 pieces of information in their head at one time.

For example:

- Provide a task plan - consider using different colours for each components of a task.

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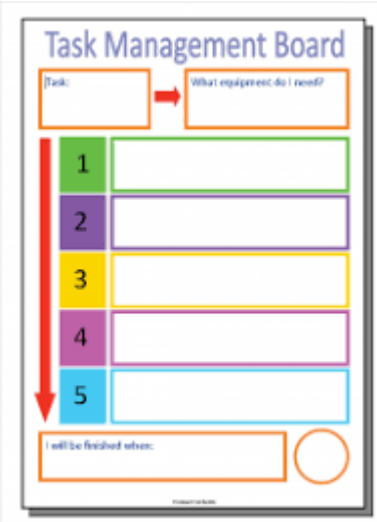
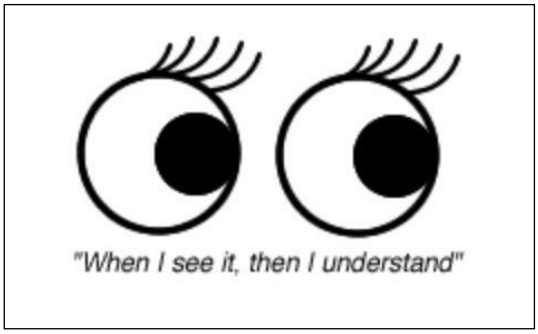
- Provide guides, step-by-step instructions, use numbers rather than bullet points so pupils can keep track of where you are up to. Post-its might be useful.
- In maths, provide multiplication tables, operation guides, number lines, calculators.
- Support writing with personalised word banks, sentence starters, visual prompts, sequencing.
- Ensure any reading materials are at an appropriate level.

- ✓ Be clear about key vocabulary, provide objects/pictures to clarify understanding, use games to learn vocabulary.
- ✓ Use multi-sensory strategies to consolidate learning and make it more memorable.
- ✓ Display key information to support topics: use interactive displays which the children have been shown how to use and allowed time to revisit – create table versions for pupils.
- ✓ Consider alternative methods of recording.
- ✓ Incorporate strategies like repeating instructions, talking/explaining to a partner.
- ✓ Repeat key information regularly **throughout** the lesson and regularly check children's understanding – ask them to explain to another child/you. Key facts should be revisited at least 5 times during the lesson and briefly the next day, week and month.
- ✓ Use the 10 second rule – give children processing time and prompt them to remain on task where appropriate





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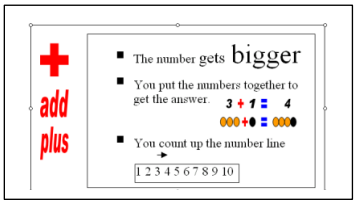
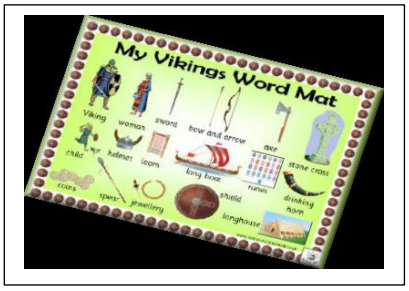
Provide memory aids & encourage meta-cognition

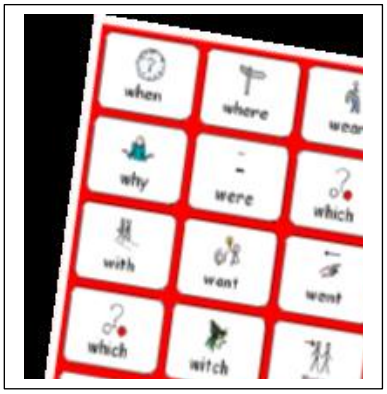
Memory Aids

Memory aids should be made readily available to all children in class, either on display or on tables as appropriate. Listed below are some examples of memory aids.





- Task plans
- Post-it notes
- Mind-maps
- Mnemonics
- Visual timetables
- Visual timelines
- Subject specific word mats with pictures
- First/next boards
- Talking post cards/tin lids
- Rule cards for the four operations in maths
- Multiplication facts, number facts to refer to
- Numberlines, multiplication squares
- "Key facts for this lesson" desk cards
- Writing frames with sentence starters, word banks & picture prompts
- Science investigation sheets – broken down, colour coded, with visual prompts
- Key rings for key information
- Topic memory cards



Develop children's awareness of what helps them learn (meta-cognition)

It is important to encourage children to understand how they learn and what works best for them. As we all learn differently, not all memory aids will be suitable for all children.

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Children need to be shown a range of strategies before they can evaluate which works best for them. They also need to develop skills in devising their own memory aids so they can start using them independently and it becomes part of their learning process. This is particularly important when children are doing tests, for example:

- Jotting down multiples at the start of the test would reduce working memory demands for a child who struggled with their time-tables.
- Jotting down a mnemonic of key facts e.g. my very educated mother just showed us nine planets or MVEMJSUNP to remember the planets.
- Drawing a picture or mindmap of key information.
- Writing down a mnemonic for maths rules, e.g. for long division - Dracula Must Suck Blood (DMSB - divide, multiply, subtract, bring down).

Some Interventions to Support Working Memory
In addition to supporting pupils in class there are activities and programmes that you can use to try and strengthen memory skills. Below are some examples and ideas -

Memory and Learning Programme – this programme is designed to help deaf children who are aged 5-11 years to develop their working memory. However, it is useful for all children with working memory difficulties.

Cogmed – this is a computer programme designed to develop working memory skills.

Memory Booster – this is a programme of computer games to practise memory skills.