

# Classroom support for children with poor working memory



## Recognising working memory failures

1. **Incomplete recall** - child cannot remember the words in a sentence they are trying to write.
2. **Failure to follow instructions** - does not follow multi-step instructions.
3. **Place-keeping errors** - child often loses track of what they have done and what has yet to be completed (e.g. may count an object more than once, write a word down twice successively or skip a chunk of a task.)
4. **Task abandonment** - child gives up, loses focus, zones out or may distract others.

Some factors that influence working memory are, **excessive length** and **content that is unfamiliar and not meaningful** (low meaningfulness and high unpredictability place heavy demands on working memory because children are not able to use their existing knowledge from their long-term memory).



## Reduce working memory loads by modifying tasks

1. **Reduce the amount of material** - shorter sentences, reduce number of steps in an instruction.
2. **Increase the meaningfulness and familiarity of material** - use information that corresponds to knowledge that has already been acquired by the child. Review a topic before a child starts to work on a memory-demanding activity that draws on this material.
3. **Simplify mental processing** – reduce processing demands in tasks that involve language information. Most learning activities involve the child remembering information AND engaging in some demanding mental processing. Mental processing will reduce the availability of working

memory storage space. Simplify the grammatical structure of sentences. Ask the question before supplying the information e.g. 'How many sweets did John have to start with? Jill ate 3 of them and he has five left.'

4. **Restructure complex tasks** – break tasks down into separate independent steps. Number instructions on worksheets. Display instructions/tasks visually using diagrams and different colours. Prompt them, 'What is the next part?'
5. **Repetition** – encourage the child to ask for repetition. Partner a child with poor working memory with another pupil with good memory abilities who will be able to model how to work their way through an activity.
6. **Use of memory aids** – spelling aids, number lines, numicon, multiplication grids, audio devices for note taking etc.



### Develop the child's use of strategies for supporting memory

1. **Request help** – ask the teacher or another pupil.
2. **Rehearsal** – rehearsing what they want to say either aloud or silently.
3. **Note-taking** – Write down important information needed to guide them through an activity and check their notes regularly during the task. Use symbols for younger children.
4. **Using long-term memory** – use long-term memory to help children learn particular chunking strategies e.g. acronyms
5. **Place keeping and organisation** – break tasks down and complete each task before starting the next one. Use counting to break it down for younger children.

L. Glennon-Cousins

(Ideas taken from Working Memory & Learning – Gathercole and Alloway)