

WORKING MEMORY

Working memory involves the ability to keep information active in your mind for a short time (2-3 seconds) to be able to use it for further processing. Working memory is a temporary storage system and is vital for many day-to-day tasks (e.g. following instructions, responding in conversations, listening, and reading comprehension, organisation).

Children use working memory all the time to learn. It is needed for things like following multi-step directions or solving a maths problem in your head. You can help your child improve working memory by building simple strategies into everyday life.

1. Work on visualisation skills.

Encourage children to create a picture in their mind of what they have just read or heard. For example, if you have asked your child to set the table for five people ask them to imagine what the table should look like, and then draw it. As children get better at visualizing, they can describe the image instead of drawing it.

2. Try games that use visual memory.

There are lots of memory games that can help children work on visual memory, like Kim's game. You could also give them a magazine page and ask them to circle all instances of the word *the* or the letter *a*. Number plates can also be a lot of fun. Take turns reciting the letters and numbers and then saying them backwards, too.

3. Play cards.

Simple card games like Snap, Uno, and Go Fish, can improve working memory in two ways. Children have to keep the rules of the game in mind and have to remember what cards they have and which ones other people have played.

4. Encourage active reading.

When reading talking out loud and asking questions about the reading material can help with working memory.

8. Help make connections.

Help your child form associations that connect different details and make them more memorable. One way is to use fun mnemonics. (For instance, the made-up name "Roy G. Biv" can help kids remember the order of the colours in the rainbow—red, orange, yellow, and so on.) Finding ways to connect information helps with forming and retrieving long-term memory. It also helps with working memory, which is what we use to hold and compare new and old memories.

9. Repetition

Reciting times tables, repeating test questions and regularly reviewing vocabulary cards should ensure that children retain information in both their short and long-term memories. Research conducted by Kent State University in the United States found that 'with retrieval practice, everything gets substantially better,' and that includes 'associative memory' (the relationship between things) and 'cue memory' (when something triggers memory).

How to play Kim's game.

Put 10 things from around the house on a tray - it could be things like a pencil, an orange, some cotton wool, a toy etc.. Ask your child to look carefully at them for about thirty seconds. Then take the tray away and ask them to call out what they remember.

Another way of playing the game is to cover the things, take one thing away and ask the child to spot what is missing. You can put more things on the tray as they get better.

You might be interested to know that the name of the game comes from Rudyard Kipling's story "Kim" where the character Kim plays this game as part of his training as a spy!

Other games to try

- Word list games: such as "I went to the shop/zoo/beach and I saw....".
- The game 'Guess Who?': The child has to eliminate characters by asking questions about what their character looks like using memory of the facial features.
- "Simon Says" and other instructional games: Give the child more than one instruction at a time and see if they can remember them all (e.g. "sit down, put your hands on your head then blink three times" or 'Obstacle Courses' where your child needs to complete an obstacle course to reach a 'goodie' by remembering the instructions to get there (e.g. 'Go under the table, behind the chair, and through the tunnel'))
- Threading beads/building a block tower: Sit in a circle with a group/or face to face and each person takes a turn to say two colours that you both need to thread/build. Take in turns to tell each other two colours and slowly increase the number of colours to get to thread/build onto their tower.
- "Get the Loot": Put pirate hats on and pretend to be pirates, set up two pirate ships with pictures of items for the 'loot' and explain that each child needs to get 2 things from the other pirate ship to bring back. Get the child to say the things they need to get 3 times before they go and get it. Increase the number of items to get.