



Learning and Memory

About learning and memory

Learning and memory describe the ability to take in, process, store, and recall information. This may be information that we have heard (e.g. spoken instructions) or seen (e.g. being shown the location of items). Learning and remembering information relies on many different skills. First, we need to take in the new information. This relies on sensory processes (e.g. hearing, seeing, touching) and cognitive processes (e.g. paying attention, concentrating, processing information quickly, and storing information in an organised way). Once information is learned, we also need to be able to get that knowledge from memory stores.

It is common for children to differ in the way they learn information. Some children are very good at learning verbal information, which means that they may only need to be told something once for them to recall it. Others may be better at learning and recalling things they have seen.

Many students with disabilities or developmental disorders need support with learning and memory. These could include students with learning disabilities, attention-deficit/hyperactivity disorder, autism or sensory disabilities. Some children with these challenges might find it hard to concentrate for long periods, take in and process information, or need more time to learn.



Evidence-based strategies

Maximise a child's understanding

- **Check you have the student's attention.** Consider using a gesture, touch, eye contact or verbal prompts to get children's attention before giving instructions or speaking to them. Ask questions to check their understanding of instructions or a task.
- **Provide clear and simple instructions.** Consider giving step-by-step instructions and breaking down complex tasks into shorter tasks. Written notes may help. Check for understanding regularly.
- **Get students to re-read things.** "Repeated reading", or getting students to re-read material, may be helpful.

Keep it interesting

- **Match teaching to interests and abilities.** Consider what students like and can do to keep things interesting or relevant and manageable for them. As their abilities increase, the workload or difficulty can be slowly increased.

Adapt activities

- **Change the activity, not the student.** If a student is struggling with an activity consider changing it. For example, if a writing task is difficult for a student to complete, they could use words or gestures to give the correct answer.
- **Give students more time and opportunities to practise.** Provide children with lots of time to practise in different settings and with different materials. It may be helpful to offer fewer tasks with more opportunities to practise. Some children might need more time to read material.
- **Mix mastered tasks with target tasks.** Students will feel more confident when learning new tasks if there are a few new tasks mixed with lots of tasks they can already do.

Adapt your teaching style

- **Use visual instructions.** Some children may benefit from visual instructions about a task or behavior. Some options include digital presentations, posters, video, or teacher/peer demonstration of the task.
- **Use hands-on learning.** Some students benefit from a practical, hands-on approach. Consider using 3D model graphs or charts, or other objects during lessons. This can be helpful in mathematics and science classes.



- **Use music, rhythm and touch.** Rhythm and music can help a child learn phonemes (speech sounds). Dots on written numbers that a student can touch and count can help a child learn to add and subtract.
- **Make it a game.** When possible mix learning with fun games so that students enjoy learning.

Provide extra supports

- **When a task is new, students will learn best with help.** When a task is new, children will learn best with help (i.e. prompts, demonstrations, encouragement). This help can be gradually reduced as they become more capable. Help can be provided by teachers or other children.
- **Give prompts and reminders.** Before starting a new activity, it may be helpful to remind students what you want them to focus on in that activity. Use cues to guide a distracted student back to the current task, or to self-monitor their behaviour.
- **Give frequent breaks.** Small breaks after finishing a small task may be helpful for some children.
- **Encourage students to problem solve.** Help students identify a problem, think of possible solutions, choose the best solution, and think about if the solution worked.

Target a child's memory skills

- **Target working memory.** Some students may need extra help to support their working memory. It may be helpful to organise tasks so that there isn't too much to remember at a time. Other options include extra supports such as mnemonics (memory strategies) or handouts/notes on the board.
- **Consider using working memory games.** Computer games targeted at working memory might improve children's ability to remember things. Consider allowing time for computer memory games multiple times a week, for a couple of months. Games are also a good way to make learning interesting and fun.

Best practice tips

Tailor the assessment approach

- Some students may need extra time for reading or writing. They may need to take breaks.



Get student feedback

- Check in with students. Some children may need adjustments to the teaching pace, their goals or the level of support given.

Remove distractions

- Some students may be easily distracted by objects both inside and outside the classroom environment. Consider sitting the student away from, or with their back to, the windows.

Provide a supportive environment

- Children might lack confidence and may worry that they will not be able to keep up with other students. Acknowledge efforts and encourage participation

Other considerations

Homework

- Some students may find completing homework without support challenging. If students experience challenges with memory, they might forget to bring homework home or to school, or forget to get homework signed by someone at home. If possible, it might help to involve parents in their child's homework.
- Consider what a child can complete independently when assigning homework, or not assigning homework to the class to give the child a break from schoolwork.

Safety drills

- Some children might find it harder to learn or remember safety procedures. They may need extra time, or demonstrations and practice runs.

Transitions

- A child with learning and memory problems may benefit from supports when moving across education settings.
- It may be helpful to teach and practice organisation and homework skills, and time- and self-management skills.



- For more information about supporting students with disabilities when transitioning to a primary or secondary school setting access AllPlay Learn's [transition page](#).
- For children transitioning to primary school access AllPlay Learn's Story A school day, and for children transitioning to secondary school access Access AllPlay Learn's story How to be Organised

Other co-occurring conditions

- Students with learning and memory challenges may also experience [cerebral palsy](#), [autism](#), [anxiety](#), [blind or low vision](#), [d/Deaf and hard of hearing](#), or signs of [Attention-Deficit/Hyperactivity Disorder \(ADHD\)](#), [oppositional defiant disorder](#) and [intellectual disability](#).
- Refer to information about these areas to help support the student.

Relevant resources

Visit our [resources page](#) for a range of resources that can help to create inclusive education environments for children with disabilities and developmental challenges. Some particularly relevant resources for children with learning issues include:

- Strengths and abilities communication checklist
- Problem solving guide
- Character strengths poster (A3)
- AllPlay Learn Story - Going on an excursion