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 young people to differ in the way they learn information. Some young people are very good at learning verbal information, which means 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 young people with disabilities or developmental disorders need support for learning and memory. These could include teens with learning disabilities, attention-deficit/hyperactivity disorder, autism or sensory disabilities. Some young people 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 student's understanding

- **Check you have the student's attention.** Consider using a gesture, touch, eye contact or verbal prompts to get students' 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 lessons 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 to suit the student

- **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 students 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 students 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.

- **Provide test accommodations.** Some students may need extra time for reading or writing, or a scribe or a reader. They may need to leave and re-enter the examination room (with supervision) to take breaks.

Adapt your teaching style

- **Use visual instructions.** Some students may benefit from visual instructions about a task or behaviour. 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 some lessons. This can be especially helpful in mathematics and science classes.

Provide extra supports for students

- **Give prompts and reminders.** Before starting a new activity, 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 students.
- **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.

Support students' academic and 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 students' 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.
- **Teach organisation strategies.** Colour-coded folders, planners or checklists can help students to keep track of notes, homework, assignments and key dates. This may include moving materials (e.g. worksheets, books) for different subjects between school and home daily. Encourage students for correctly organising and checking off things in their checklists.

- **Teach homework management skills.** It may be helpful to teach students how to use a homework planner, and give them prompts when they need to write things down. Some students may need to be shown how to break down projects and study into smaller tasks, and to plan their time. Teachers can check and sign planners.
- **Teach note-taking skills.** Students can be taught note-taking and summarising skills during a lesson through simple and direct instructions. Prompts and redirection may help students to take accurate notes. This support can be reduced when they can record information and write notes clearly and concisely without help.

Best practice tips

Get student feedback

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

Coaching system

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

Provide a supportive environment

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

Ask parents

- Talk to parents to find out the best way to communicate and work with their teen. Parents can help you understand a student's unique strengths and areas they need more help.

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 student can complete independently when assigning homework, or not assigning homework to the class to give the student a break from schoolwork.

Safety Drills

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

Transitions

- Students might have extra challenges transitioning from school to adult life. Access AllPlay Learn's [transition page](#).
- Post-school transition to adult life should begin as early as possible in school.
- Aim to increase independence by working on organisational, social and problem-solving skills, and time- and self- management skills. Provide plenty of opportunities to practise them across a range of contexts.
- It may be helpful to identify skill gaps and develop a support plan to help them be successful (e.g. social skills, academic and/or employment skills).

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 students with disabilities and developmental challenges. Some particularly relevant resources for supporting students with learning and memory issues include:

- Strengths and abilities communication checklist
- Locker checklist
- Problem solving guide
- Character strengths poster (A3)