

# Memorization Strategies

Many high school courses require you to memorize mass amounts of information. Memorizing for one class can be difficult, but it can be even more frustrating when you have multiple classes. Many students feel like they simply do not have strong memory skills. Fortunately, though, memorizing is not just for an elite group of people born with the right skills—anyone can train and develop their memorizing abilities.

Competitive memorizers claim that practicing visualization techniques and using memory tricks enable them to remember large chunks of information quickly. Research shows that students who use memory tricks perform better than those who do not. Memory tricks help you expand your working memory and access long term memory. These techniques can also enable you to remember some concepts for years or even for life. Finally, memory tricks like these lead to understanding and higher order thinking. Keep reading for an introduction to effective memorization techniques that will help you in school.

## Simple memory tips and tricks

In addition to visual and spatial memory techniques, there are many others tricks you can use to help your brain remember information. Here are some simple tips to try. Check out the [Memory Tips](#) video on our Learning Center website for a quick explanation of many of these tips.

**Try to understand the information first.** Information that is organized and makes sense to you is easier to memorize. If you find that you don't understand the material, spend some time on understanding it before trying to memorize it.

**Link it.** Connect the information you are trying to memorize to something that you already know. Material in isolation is more difficult to remember than material that is connected to other concepts. If you cannot think of a way to connect the information to something you already know, make up a crazy connection. For example, say you are trying to memorize the fact that water at sea level boils at 212 degrees Fahrenheit, and 212 happens to be the first three digits of your best friend's phone number. Link these two by imagining throwing your phone into a boiling ocean. It's a crazy link, but it can help that fact to stick.

**Sleep on it.** Studies show that your brain processes and stores information while you sleep. Try to review information just before you go to sleep—even if it's only for a few minutes—and see if it helps embed the information in your memory.

**Self-test.** Quiz yourself every so often by *actively* recalling the information you are trying to study. Make sure to actively quiz yourself—do not simply reread notes or a textbook. Often, students think they remember material just because it is familiar to them when they reread it. Instead, ask yourself questions and force yourself to remember it without looking at the answer or material. This will enable you to identify areas that you are struggling with; you can then go back to one of the memory tricks to help yourself memorize it. Also, avoid quizzing yourself immediately after trying to memorize something. Wait a few hours, or even a day or two, to see if it has really stuck in your memory.

**Use distributive practice.** For a concept to move from your temporary working memory to your long-term memory, two things need to happen: the concept should be *memorable* and it should be *repeated*. Use repetition to firmly lodge information in your memory. Repetition techniques can involve things like flash cards, using the simple tips in this section, and self-testing. Space out your studying and repetition over several days and start to increase the time in between each study session. Spacing it out and gradually extending the times in between can help us become more certain of mastery and lock the concepts into place.

**Write it out.** Writing appears to help us more deeply encode information that we're trying to learn because there is a direct connection between our hand and our brain. Try writing your notes by hand during a lecture or rewriting and reorganizing notes or information by hand after a lecture. While you are writing out a concept you want to remember, try to say the information out loud and visualize the concept as well.

**Create meaningful groups.** A good strategy for memorizing is to create meaningful groups that simplify the material. For example, let's say you wanted to remember the names of four plants—garlic, rose, hawthorn, and mustard. The first letters abbreviate to GRHM, so you can connect that with the image of a GRAHAM cracker. Now all you need to do is remember to picture a graham cracker, and the names of the plants will be easier to recall.

**Use mnemonics.** Mnemonics are systems and tricks that make information for memorable. One common type is when the first letter of each word in a sentence is also the first letter of each word in a list that needs to be memorized. For example, many children learned the order of operations in math by using the sentence *Please Excuse My Dear Aunt Sally* (parentheses, exponents, multiply, divide, add, subtract). Check out online resources for lists of examples and ideas.

**Talk to yourself.** It may seem strange at first, but talking to yourself about the material you are trying to memorize can be an effective memory tool. Try speaking aloud instead of simply highlighting or rereading information.

**Exercise!** Seriously! Studies show that exercise can improve our memory and learning capabilities because it helps create neurons in areas that relate to memory. Cardio and resistance training (weights) both have powerful effects, so do what work best for you.

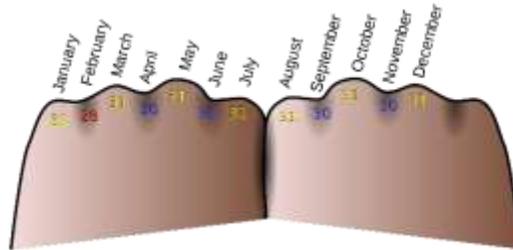
**Practice interleaving.** Interleaving is the idea of mixing or alternating skills or concepts that you want to memorize. For example, spend some time memorizing vocabulary words for your science class and then immediately switch to studying historical dates and names for your history class. Follow that up with practicing a few math problems, and then jump back to the science definitions. This method may seem confusing at first, but yields better results in the end than simply spending long periods of time on the same concept.

## Visual and spatial techniques

Visual and spatial techniques are memory tricks that involve your five senses. They utilize images, songs, feelings, and our bodies to help information stick. Humans have outstanding visual and spatial memory systems. When you use visual and spatial memory techniques, you use fun, memorable, and creative approaches rather than boring, rote memorization. This makes it easier to see, feel, or hear the

things you want to remember. Visual and spatial techniques also free up your working memory. When you group things together, you enhance your long-term memory. Using visual and spatial techniques helps your mind focus and pay attention when your mind would rather wander to something else. They help you make what you learn meaningful, memorable, and fun.

The common practice of using your knuckles to remember the number of days in each month is a great example of an easy visual spatial technique to help you remember details.



**Memorable visual images.** The next time you have a key item you need to remember, try making a memorable visual image to represent that item. Images are important because they connect directly to your brain's visuospatial centers. Images help you remember difficult concepts by tapping into visual areas. But you don't just have to use images—the more of the five senses you can use, the easier it will be for you to recall information. Rather than just visualizing an image, try to *smell*, *feel*, and *hear* the image as well. For example, if you are trying to remember that the capital of Louisiana is Baton Rouge, draw up an image of a girl named Louise carrying a red baton.

**The memory palace technique.** This technique involves visualizing a familiar place—like the layout of your house or bedroom—and using it as a visual space where you can deposit concept-images that you want to remember. This technique can help with remembering unrelated items, like a grocery list. To use the memory palace technique, visualize your place (house or bedroom) and then imagine items from your grocery list in different areas around the place. For example, picture a cracked egg dripping off the edge of the table or a bushel of apples sitting on the couch. This technique can take some time to get used to, but once you do, the quicker and more effective it becomes.

**Songs and jingles.** Much like the memory palace and images, songs or jingles use your brain's right hemisphere and can help us remember tricky things like equations and lists. There are already plenty of songs out there for things like the quadratic formula—try Googling what you are trying to remember to see if someone has already created a tune. If not, try making your own.

**The five senses.** Using as many of the five senses as possible when studying helps you use more parts of your brain and retain information better. For example, if studying for an anatomy exam, pick up the anatomy models, feel each part, and say the names of them out loud.

**Lively visual metaphors or analogies.** This can help you to not only remember but *understand* concepts, especially in math and science. A metaphor is a way of realizing that one thing is somehow similar to another. For example, think about the country of Syria as shaped like a bowl of cereal and the country Jordan as a Nike Air Jordan sneaker. Metaphors—especially visual ones—can stick with you for years. They help glue ideas in your mind because they make connections to neural structures that are already there.

## Final thoughts

Some of these techniques can feel strange at first or take some time to develop. The more you practice them, the easier and more natural they become, and the more information you can commit to memory. Also, remember that you do not need to do every tip on this list. Experiment with a few and find which ones work for you.

## Works consulted

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“Tips & Tools.” Learning Center, [learningcenter.unc.edu/tips-and-tools/](http://learningcenter.unc.edu/tips-and-tools/).