



MODULE 9 Using Memory Enhancement Techniques

An Effective Reading Process: Student Strategies

If you are studying a new subject area, you know you have a lot of information to digest and remember. So, how do you determine which information is most important to commit to long-term memory? This handout contains suggestions on how to determine which information you need to remember and then how to best memorize that material. Remember, it takes time and practice to make memorization techniques work. The strategies that follow help you to avoid cramming and remembering non-essential information. Cramming might work to remember material for 24 hours, but it won't aid with long-term understanding of a subject, and so it will not provide you with a firm foundation for future learning.

STRATEGY #1: Creating a Personal Memory Strategy—Selective Memorization

You may need help determining which information is most important to commit to long-term memory. Therefore, before collecting information to memorize, you should take time to consider what information you need to remember and then how to best memorize that material. Consider taking a learning style assessment to help you determine your learning strengths: visual, auditory, kinesthetic.

1. First determine what information needs to be remembered. You might decide this on your own, or your instructor might provide you with some direction or clues.
 - Review a study guide if one is provided.
 - Study the review ideas at the end of your textbook chapters if they are available.
 - Pay close attention to the ideas emphasized in your instructor's lectures and take copious notes during lectures and class activities.
 - Go over your notes after the lecture to organize ideas and align them with the ideas gained from reading assignments. Organize groupings of ideas and concepts for application of memorization strategies.
2. Determine the purpose for remembering the information. Is it to perform on a test, complete a lab experiment, or make a presentation?
3. Review the information as it was delivered, whether in class notes, from a textbook, or through an online discussion board. Reviewing the information in its original context will help make meaningful connections to the material rather than just being able to "report" what you know.
4. Practice recalling the information in the same way you'll be expected to deliver it: writing it, practicing it, verbalizing it. Practice at increasingly longer intervals to both refresh and test your memory.
5. Review your reading annotations and/or class notes several times to reinforce memorization within the original context.



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Strategy #2: Using Auditory Memory Strategies

If you are someone who learns well through listening, this is a good way to practice remembering. Verbalize, or talk-through, the information you need to understand and remember from your assigned reading. Depending on the purpose, this can be done word-for-word or in your own words. Putting the information in your own words will strengthen comprehension.

Here are some strategies you can use to improve your auditory memory.

1. Teach the material either in a small group or to the class. You probably have heard that you truly learn something when you teach it. Teaching it will help you comprehend ideas at a deeper level as this activity requires you to restate concepts in your own words.
2. Engage in narrative chaining of ideas by creating a story which weaves together ideas and concepts.
3. Study out loud. Strong auditory learners should review study notes, lecture notes, and even reading annotations out loud.



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Strategy #3: Using Visual and Kinesthetic Memory Strategies

If you are a visual learner, you need to see what you want to remember. If you are someone who learns well by moving or doing something, you are a kinesthetic learner and should incorporate movement into your learning strategies for greater success.

Here are effective strategies to use to improve your reading comprehension and memory once you have completed an assigned reading:

1. Write, rewrite, or type the information for visual and kinesthetic inputs.
2. Organize information in a chart, idea web, outline or other kind of concept map.
3. Associate a concept with visual imagery. Draw pictures. The more vivid the images, the more memorable. This act of creation requires you to use your imagination to think of visual images associated with the concepts/ideas you wish to understand and remember.



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Strategy #4: Creating Rhymes, Jingles, Songs

Children learn many things by singing about them: the days of the week, the months of the year, the names of the continents and planets. As we get older we tend to remember the words to songs and advertisement jingles we hear on the radio and television. The same concepts can be applied to reading assignments.

Try the following, which address all learning styles:

- **Rhymes:** Remember learning “In 1492, Columbus sailed the ocean blue?” Have dates or other concrete facts to remember? This could be the way! Create some rhymes and share them.
- **Songs:** Write a rap or lyrics to a song that reviews a grouping of ideas or concepts to be remembered.
- **Jingles:** “Double your pleasure, double your fun with double good, double rich, Double-mint gum” How creative are you? Think up jingles to remember ideas, and you’ll remember them, maybe forever!



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Strategy #5: Creating a Sentence

Another way to help you remember is to create a sentence in which the first letter of each word stands for what you are trying to remember.

Here are some examples:

A student wanted to remember the planets in our solar system:

Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune.

So, she made up the silly sentence to help her remember the first letter of each of the planets:

My Very Educated Mother Just Served Us Nachos.

In music, students need to remember the lines of the Treble Clef: EGBDF. So, they might use the sentence:

Every Good Boy Does Fine.



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Strategy #6: Creating Acronyms and Initialisms

Acronyms and initialisms are formed by using the first letter from a series of words. In some cases they are pronounced as a word, in others the letters are pronounced individually. Some examples include: NCAA for National Collegiate Athletic Association, CNN for Cable News Network and NATO for North Atlantic Treaty Organization.

You can create your own acronyms to help you remember concepts or processes. For example, let's look at a simple process of the water cycle. The four general stages are: evaporation, condensation, precipitation, and collection. If expected to remember the four stages in their order, you would concentrate on repeating: ECPC. What's nice about this one is that it rhymes!

When you take the test, you could write:

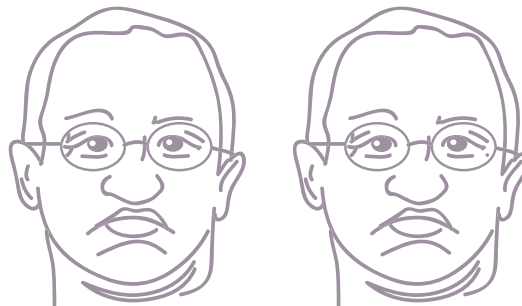
E
C
P
C

and then fill in the rest of the words.

Evaporation
Condensation
Precipitation
Collection

If the order doesn't matter, you can make up a word to help you remember. Nancy Wood's first-year composition textbook, *Perspectives on Argument*, did this with logical appeals: SICDADS--accompanied by an image of two ill fathers. Because SICDADS is a nonsense word, the visual helps reinforce the memory.

Sign
Induction
Cause
Deduction
Analogy
Definition
Statistics



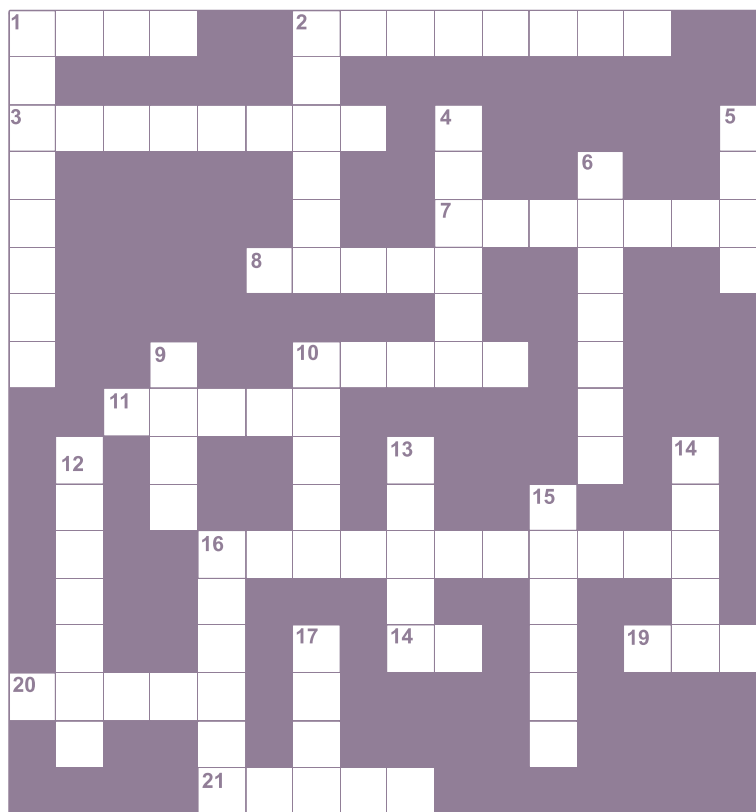
"SICDADS" = Logical Proof



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Strategy #7: Creating a Cross-word Puzzle

This technique of creating your own crossword puzzle can help you remember vocabulary from your reading assignment as you associate vocabulary with the definitions. You not only consolidate your learning as you construct your puzzle, but you also benefit from testing your learning as you do the puzzles of the other members of your class. Typing “blank crossword puzzles” in an internet search engine will help you locate tools to get you started.





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Strategy #8: Using a Pathway to Learning

An ancient strategy for remembering the sequence of a speech was to imagine the rooms of a house. Parts of the speech would then be associated with the various rooms. By the time the speaker imagined walking through the house, the speech would be complete. You can use this strategy to remember ideas and concepts from your assigned reading. Here is an example of how this strategy can be used.

One way to recall important concepts from what you read is to visualize them. You can do this even in your own bedroom. Start by writing each idea or concept you want to remember on separate cards or pieces of paper. Then create your route by starting at the door and going right. For example, place your idea cards in a sequence like this:

idea one--on your dresser;

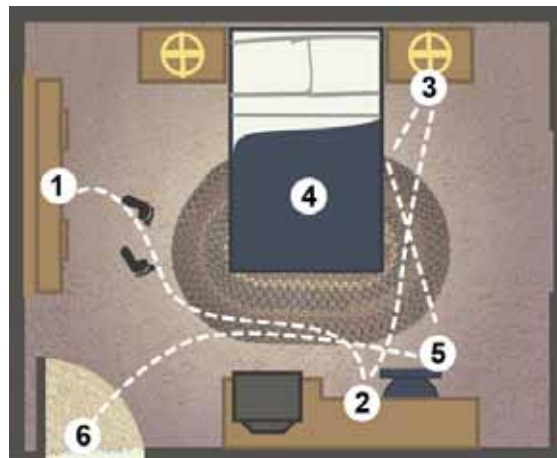
walk a little further to idea two--on your desk;

proceed to place idea three--on your bedside lamp;

idea four--goes on your bed (but don't lie down and go to sleep!);

idea five--on your easy chair;

idea six--on your door.



Then walk the path a few times, stopping to go over each idea to memorize it. One time probably will not be enough, so spread out the learning over a few days. When you think you are ready, turn over your notecards, and walk the pathway. See if you can remember each idea or step at each stop. Repeat this a few times before the test or before you have to use the information.

Then, walk the pathway in your mind. Make each stop mentally along the way, and you should find you remember the important concepts from your reading!

Try it and see!



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Useful Resources

Memory games.

<http://www.lumosity.com/brain-games/memory-games>

The Lumos Lab website, Lumosity, is devoted to brain training and memory improvement. This webpage includes 13 fun and fast interactive games designed to boost memory skills. The main games page linked at the top also has activities that improve other brain skills including speed, attention, flexibility, and problem solving.

Memory principles: Quick reference guide for brain compatible learning principles.

<http://frank.mtsu.edu/~studskl/mem.html>

The information on this page, adapted from *Practicing college learning strategies* (3rd ed.) by Dr. Carolyn Hopper (2003), links brain research to study skills in an interesting way. The designers include ten memory principles that are divided into four categories: making an effort to remember, controlling the amount and form, strengthening neural connections, and allowing time to solidify pathways. Each subtopic has a link that leads to sets of ideas for improving memory and a link to brain research that explains how and why the techniques work.

Sleep and learning (2003). Brain Briefings.

http://www.sfn.org/skins/main/pdf/BrainBriefings/BrainBriefings_Apr2003.pdf

This brief article from the Society for Neuroscience confirms that sleep plays an important part in memory. The authors report that a variety of recently conducted studies on both humans and animals point to very strong conclusions. One is that adequate sleep improves performance on procedural memory tasks (those which help people learn skills). Also, brain mapping shows that the same parts of the brain that are active during procedural learning are reactivated during sleep. This demonstrates that the brain reprocesses information while sleeping and uses sleep to help store memory.

Solomon, B., & Felber, R. Index of learning styles questionnaire.

<http://www.engr.ncsu.edu/learningstyles/ilsweb.html>

This 44-question survey will help students determine where their learning preferences lie. Learners are categorized to be active/reflective, sensing/intuitive, visual/verbal, sequential/global. Descriptions of these learning styles as well as strategies for learning are provided. Students may want to take this assessment, or one like it, to help them determine the best way to study and remember information from their classes.

Strategies for improving concentration and memory.

<http://www.ucc.vt.edu/lynch/ImprovConcentration.htm>

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****Please bear in mind that documents on the web might change location or go away. If a link provided here does not work, try searching the key terms in a search engine or locating more of your own resources.**