



Don't Forget!

Activity 1: Grades 9-12

Memory Tests

Memory is a powerful element of our thinking process that allows us to recall past events. As we age, however, we become more forgetful. Most individuals experience a slow decline in memory. Others, however, will follow a more rapid loss of memory. Until recently, it was believed that the loss of memory was an expected part of the aging process. Research now suggests that keeping the brain active may delay or slow the loss of memory function in many individuals. There are also memory strategies that can aid recall. Using these strategies can create new thought and recall patterns that circumvent natural memory losses.

This activity page will offer:

- A minds-on and hands-on experience in memory
- An opportunity to compare memory tricks
- Tools and ideas for improving memory

Memory Tricks

There are all sorts of ways to improve your memory. In addition to proper diet, adequate exercise, reduced stress and healthy lifestyle choices, there are strategies and memory "tricks" for improving recall. Most likely, you've already learned to use some of these practices. However, there are many different techniques that are available to increase recall. In the following section, we'll offer up an assortment of memory experiences that you might find yourself using in other situations (if you can remember them).

Acronyms

An acronym is a very common memory device. It uses an abbreviation that takes the first letter in each word to be remembered to form a new word. Check out the familiar acronyms below. What do they stand for? NOTE: Some acronyms use two letters from one word.

RAM
CPU

PBS
NATO
CIA
SCUBA
RADAR
SONAR
NASA

State an Acronym

Use a United States map to select any five neighboring states. Use the first letter in each of the selected state's name to compose an acronym. Exchange acronyms with another student. Can you both identify each others' states based upon decoding this memory device? How might the order of the letters in the acronym communicate additional information? (It might offer clues to the positions of the states)

Acrostics

Although you probably never heard the term "acrostic," you are familiar with its use. An acrostic is very similar to an acronym. However, instead of using the first letters to spell a single word, these letters are used to spell different words that form a sentence or memorable phrase. The classification scheme for living things might be a familiar acrostic: *King Philip Came Over For Great Spaghetti* is a difficult phrase to forget. Therefore, it remains a great tool for remembering: Kingdom, phylum, class, order, family, genus, species.

Your Turn

Use the following sets of related terms to create a memorable acrostic. Share your phrases with your classmates and develop appropriate ones to help study for upcoming exams:

- a) Phases of mitosis
- b) Eras of geologic time
- c) Groups of the periodic table
- d) Sections of atmosphere
- e) Countries in South America
- f) Functions in mathematical quadrants

Epic Memory

The rhyming structure of a poem offers a consistent and repeating framework in which to embed words for recall. Historically, epic stories such as Homer's *Iliad* were passed on from generation to generation through recall alone. Even today's memory record holders use poems and similar language structures to aid retention. Using these types of linguistic strategies, individuals can recall the value of pi to more than 40,000 places! Your challenge is a little less daunting. Take a look at the 20 words below. Work with a partner to compose a poem that will help you recall all 20 words in order. Compare your work to the poems of classmates. What makes this type of memory device most effective? Is there a particular rhyming scheme that is more effective as a memory strategy? Explain.

Airplane
Hockey B
urnt
Nylon
Light
Australia
Doll
School
Crying
Electron
Twenty-eight
Hair
Extra
Bulb
Wonder
Thumb
Salute
Plastic
Liner
Cylinder

Memory Walk

A memory walk is another technique that improves recall. A memory walk can involve either an actual setting or a fantasy setting in which the words to be memorized are encountered along a traveled route. Work with another student. Discuss which type of route, actual or fictional, might create a stronger framework for recall. Then, develop a strategy for inquiry that might compare these two versions of a memory walk. Share your design with your instructor and perform the test. Tally class results and discuss what you have uncovered.

Chunking

Chunking is another memory trick that helps recall by limiting items to smaller "chunks." For example, a phone number is often remembered (and recited) as three distinct chunks such as 202-931-8956. Memorizing these three discrete chunks is more effective than memorizing a series of 10 numbers (2029318956). What's your social security number? Chances are you've chunked its recall into three or four separate number series. So which chunk size is best? Design a strategy for inquiry that would explore the most effective chunk size in memorizing a series of numbers. Then, employ friends and family to assist in your research.

Memorable Moments

Where were you when you learned of the horrific events of September 11? Most likely, you remember the time and place when you first became aware of this startling news. That's because the emotional attachment to this event was powerful enough to generate a strong and vivid memory. What else can you remember about that moment? Can you describe your surroundings? Do you

remember what you were wearing? What other "memory- intensive" events might be common to other students in your grade? Explain.

Web Connection

[Memory and Aging Resource Center](http://www.memory.ucla.edu/)

<http://www.memory.ucla.edu/>

An overview on age related memory loss including an audio file of a radio interview with Director of the UCLA Center on Aging, Gary Small.

[Neuroscience for Kids-Memory and Learning](http://faculty.washington.edu/chudler/chmemory.html)

<http://faculty.washington.edu/chudler/chmemory.html>

An assortment of online memory tests, experiments and games.

[Mnemonic Techniques and Specific Memory Tricks](http://brain.web-us.com/memory/mnemonic_techniques.htm)

http://brain.web-us.com/memory/mnemonic_techniques.htm

An assortment of mnemonic memory techniques and links to various pages that address a range of memory topics.

[Memory and Mental Calculation World Records](http://www.recordholders.org/en/list/memory.html#pi)

<http://www.recordholders.org/en/list/memory.html#pi>

An assortment of unbelievable memory and math calculation records.

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RAM **R**andom **A**ccess **M**emory

CPU **C**entral **P**rocessing **U**nit,

PBS **P**ublic **B**roadcasting **S**ervice

NATO **N**orth **A**tlantic **T**reaty **O**rganization

CIA **C**entral **I**ntelligence **A**gency

SCUBA **S**elf **C**ontained **U**nderwater **B**reathing **A**pparatus

RADAR **R**adio **D**etection and **R**anging

SONAR **S**ound **N**avigation and **R**anging

NASA **N**ational **A**eronautics and **S**pace **A**dmistration