



Don't Forget!

Activity 1: Grades 5-8

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 suffer 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).

Materials

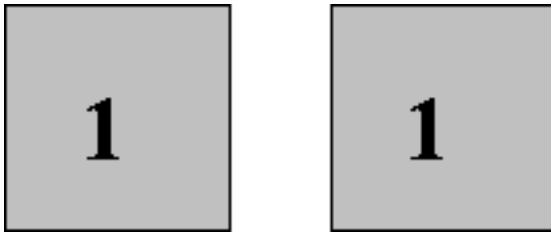
- Heavy stock paper*
- Markers
- Ruler
- Scissors

*If applicable, you could use decks of standard playing cards or specialty decks such as Old Maid or Go Fish.

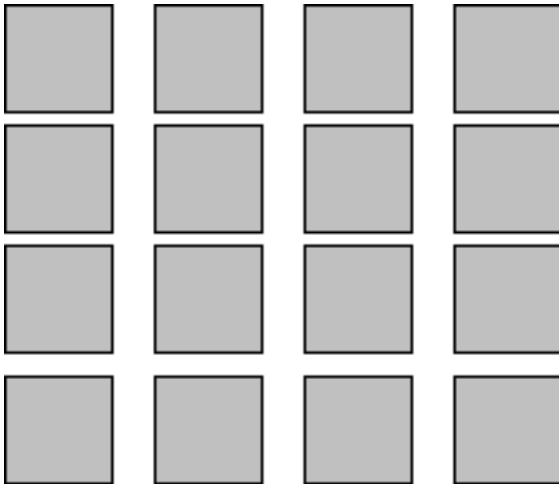
Procedure

Memorizing Positions

1. Work in teams of two. Use your ruler to divide a sheet of the heavy stock paper into 16 same-sized squares.
2. Carefully separate the squares using a scissors.
3. Divide the squares into two equal piles. Write the number "one" in the center of one pair of square. Continue numbering the squares until you have eight pairs (numbered 1-8).



4. Assign the role of researcher and subject. During this step, the researcher turns the cards over. Next, the researcher shuffles the squares and arranges them in a 4 x 4 matrix.



5. The subject then identifies two of the cards to be turned over. The researcher flips the two cards over. If the cards match, they are removed from the matrix. If they do not match, they are turned back over and their identities hidden. This is recorded as round one.
6. The subject identifies two more cards to be turned over. If they match, they are removed. If not, they are turned back over in their places. The results are recorded as round two.
7. The rounds continue until all the cards have been matched and removed from the pattern. The roles are exchanged and steps 4 through 6 are repeated.

Questions

1. Is memory alone responsible for success in this challenge? Explain.
2. Does a card's position affect your ability to recall its identity?
3. Suppose you marked one pair of cards with identical symbols instead of numbers. Would this affect memorization? Explain.
4. What trends did you observe in this memory game? How could they be explored with additional research?

Scented Extension

Suppose you repeated this activity, but used scents instead of numbers as a means of card identification. Create a strategy for inquiry that could be used in the classroom to test short-term scent memory. Share your design with your instructor and, with his or her approval, perform the test.

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 states' names 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.)

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 of 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.

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1. Is memory alone responsible for success in this challenge? Explain.
(No. Although memory is essential in recalling the locations of flipped cards, "chance" also has a role. You can get lucky and turn over pairs without knowing the value of the cards.)
2. Does a card's position affect your ability to recall its identity?
(Most likely, since some positions are memorable. Often the corners are memorable positions that make recall easier.)
3. Suppose you marked one pair of cards with identical symbols instead of numbers. Would this affect memorization? Explain.
(The "uniqueness" of the pair identity would help you recall their positions.)
4. What trends did you observe in this memory game? How could they be explored with additional research?
(Accept all reasonable answers.)

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RAM Random Access Memory

CPU Central Processing Unit

PBS Public Broadcasting Service

NATO North Atlantic Treaty Organization

CIA Central Intelligence Agency

SCUBA Self Contained Underwater Breathing Apparatus

RADAR Radio Detection and Ranging

SONAR Sound Navigation and Ranging

NASA National Aeronautics and Space Administration