

How To: Use Mnemonic Devices Using Imagery

DQ2: HELPING STUDENTS EFFECTIVELY INTERACT WITH NEW KNOWLEDGE

Element 12

Strategies for Helping Students Record and Represent Knowledge

Mnemonic Devices

This instructional strategy is a memory aid that helps the student link new content to existing knowledge. Rhymes, phrases, acronyms and other devices are used to help the student recall information. This strategy should be used only after the student has been introduced to the information and is beginning to understand the content. Many believe that mnemonic strategies that link to visual imagery are the strongest memory tools. Early education uses imagery when introducing the letters of the alphabet by showing picture cards of an apple then stating “a” is for apple.

Imagery can also be used to remember abstract information. The important content that needs to be remembered must to be linked to a key word or image that reminds you of the content you are trying to remember. For example when trying to recall there are two hydrogen atoms and one oxygen atom in one molecule of water, the student could visualize two hydrants on top of an oxygen tank. The hydrants are the substitute (key word) for hydrogen and the oxygen tank is the image used for oxygen.

The **rhyming pegboard or peg word system** can be used to remember lists or when order is important. This strategy uses a preset list of words that rhyme with the numbers one through ten.

1 is bun	6 is sticks
2 is shoe	7 is heaven
3 is tree	8 is gate
4 is door	9 is line
5 is hive	10 is hen

These peg words are substituted for the number and then associated with key words. For example, to remember that an insect has six legs imagine an ant on a pile of sticks; to remember that a spider has eight legs, picture a spider crawling up a gate.

Another example using this system is remembering the order of the presidents of the United States. Students need to develop images using the above rhyming words and associate them with the appropriate president. George Washington is chopping down his cherry tree with a bun; John Adams is sitting in the oval office tying his shoe; Thomas Jefferson is climbing a tree on the lawn of the White House; James Madison is knocking on the front door of the White House, etc. The more bizarre, outlandish or vivid the images, the more likely the student will remember the content linked to the images.

The peg word system can be used to remember the three Acts that Britain passed that lead to the Revolutionary War. The students could picture a sugar bowl pouring sugar on top of a bun to represent the Sugar Act which was passed first in 1764. The Stamp Act (1765) could be remembered picturing a pair of shoes covered in stamps. Perhaps the Townshend Act (1767) could be represented by a tea pot (representing the Boston Tea Party which was a result of the Townshend Act) with a tree growing out of the pot. The bun represents the first Act, the shoes signify the second Act and the tree symbolizes the third Act.

The **link strategy** is a mnemonic that involves linking symbols and substitutes (key words) together to form a chain of events or a narrative story. Each of the objects in the story is visualized interacting with the neighboring objects in the story or chain to form an overlap or connection between the ideas. The first step is to picture the first two things on your list and visualize an interaction between the two. If the ideas are difficult to picture you may use key words that sound like the term you are trying to memorize. The more unusual the interaction, the more likely it will be remembered. Continue to progress through the list making those sequential visual connections to create a chain of images. When this information is recalled, the first item should trigger the memory of the second item and so on.

There is an excellent example linking the 13 original colonies together using this strategy in *The Art and Science of Teaching*. New York is remembered with the image of the Empire State Building and George Washington relates to Georgia. All of the states are identified with an image and they are then linked together in a humorous narrative detailed in the text. Please refer to the text if you are not familiar with this example.

Another example of the link memory system to help remember the order of the planets from the sun is shown below and can be found at <http://www.mindmagician.org/memlink.aspx>.

“Freddie MERCURY sings to a goddess (VENUS). She picks up some EARTH and throws it at the god of War (MARS) who is then hit by a thunderbolt (Sky God – JUPITER) which causes Satan (SATURN) to appear. Satan has an Atomic Bomb (Uranium – URANUS) which he detonates in the sea (God of the Sea – NEPTUNE).”

One of the main problems with the link strategy is that it is difficult to remember a specific concept that is in the middle of the chain. For example, to remember the fifth planet, the student would need to go through the first part of the chain or story until he got to the fifth element – Jupiter. The peg word system mentioned above is more helpful if remembering the position or number of the term is important.