

IVB:

IVB-1.1 Characterize the difference between surface and deep (elaborate) processing.

IVB-2.1 Describe the operation of sensory memory.

IVB-2.2 Describe the operation of short-term memory and working memory.

IVB-3.1 Analyze the importance of retrieval cues in memory.

IVB-5.2 Describe the strategies for improving memory based on our understanding of memory.

Learning Intention/Objective:

TSW Describe the operation of declarative, nondeclarative, sensory, short-term and working, and long-term memory.

TSW Apply retrieval cues to real life situations by performing the operation span task and recency effect activity.

Essential Question:

How are sensory and working memory different and what purposes do they serve?

Resources:

Promethean Board

Warm-Up/Anticipatory Set:

We will warm up with a quick question: Which type of memory did you use last night when you were getting ready for bed? Students will be expected to record their answer in their notebooks and then we will have a brief discussion about the different types of memory students came up with.

Lesson Learning Activities:

Formative Assessment: Similar to day one, we will be working from a PowerPoint and structured note taking for a portion of this lesson. Another portion will be an activity in which students test their own working memory skills. The main concepts we'll be working through are sensory memory and working memory.

Operation Span Task: A number of tasks are used to measure working memory capacity, and a common characteristic is that working memory tasks require participants to hold information in memory while processing information, which is what you have to do when you mentally multiply 12 times 17. For example, you might first multiply 10 times 17 and get 170. You then have to hold that product in memory while you multiply 2 x 17 to get 34. you then have to add 170 and 34 to solve the problem.

Recency Effect Activity: When an individual is processing new information, the amount of information retained depends, among other things, on what it is presented during the learning episode. At certain time intervals during the learning we will remember more than at other intervals. Try a simple activity that Madeline Hunter devised to illustrate this point. You will need a pencil and a timer. Set the timer to go off in 12 seconds. When you start the time, look at the list of 10 words below. When the timer sounds, cover the list and write as many of the 10 words as you remember on the lines to the right of the list. Write each word on the line that represents its position on the list, i.e., the first word on line one, etc. Thus, if you cannot remember the eighth word, but you remember the ninth, write it on line number nine. Start the time and stare at the word list for 12 seconds. Now cover the list and write the words you remember on the lines to the right. Don't worry if you did not remember all the words. Turn to your list again and circle the words that were correct. To be correct, they must be spelled correctly and be in the proper position on the list. Look at the circled words. Chances are you remember the first 3-5 words (lines 1 through 5) and the last 1-2 words (lines 9 and 10), but had difficulty with the middle words (lines 6-8).

Assessment (include scripted questions):

How do we have evidence of a sensory register?

What are some characteristics of working memory?

How do we use chunking to remember longer items?

What are the four key parts of Baddeley's Model of Working Memory?

Can you think of a situation when the primacy and recency effects were present in your life?

Closure:

I will close this class with an exit ticket: How is sensory memory different from working memory?