

Memory 1

Objectives

- Demonstrate problems with eyewitness testimony
- Discuss the different types of memory
- Perform a basic explicit recall task to demonstrate primacy and recency effects
- Spend the remaining time learning mnemonic devices to aid in memory

Concepts

- Memory is not absolute, and is actually prone to errors
 - Memory is multifaceted, and includes the following, sensory memory, working memory, episodic, semantic, and procedural
 - Memory can be augmented through simple 'hacks'
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Setup:

Materials: List of words for primacy/recency task, spare paper for the students to write on, printed out stores

Teacher Preparation: Print handouts

Classroom Preparation: Make sure that there is a clear path for the pizza thief confederate to run away in, have a pile of books for the chaser to knock over, have whiteboards out at the tables

In the Classroom:

Warm-up Activity (5 minutes): Pizza is given out, presenter begins to talk about memory. About 30 seconds into the introduction, the confederate comes and quietly steals the pizza. As there about half the way to the door, the presenter calls him or her out. The pizza thief looks back and runs away. The presenter chases, and knocks over a pile of books

Lesson Introduction/Description (5 minutes): Presenter returns with the pizza, and informs them that the students that they will be doing an exercise. The presenter continues to discuss memory, hitting on topics of eyewitness testimony

and systematic errors in memory. At the end of the talk, the presenter informs the students that they purposefully delayed them to make them forget more.

Activity 1 - Pizza thief recall (20 minutes):

We break into groups and students fill out a worksheet individually, describing the pizza thief. Afterwards, they will discuss between themselves and come to a group consensus on what the thief looked like. Finally, we will have a very brief discussion between groups (basically a read out of the consensus) and the confederate will be reintroduced to the room. The presenter will be

Activity 2 - Memory discussion (5 Minutes)

Discuss with the students the following questions:

- 1) Are there different types of memory?
- 2) You know that hydrogen is a gas. Do you remember when you learned that? Do you remember anything about the situation?
- 3) (To instrument players) Do you know how to play a song on your instrument? Do you remember learning it? Can you remember learning a musical piece that you can't play anymore?

The end goal is to write down notes, and break memory into the following categories:

Sensory (<.1 seconds): This is the shortest lasting memory. It is the ability to retain impressions of sensory information after the original stimuli have ended. For example, it lets you keep the image of the room in your mind when your eye saccades all around

Episodic: Episodic memory is the memory of autobiographical events (times, places, associated emotions, and other contextual who, what, when, where, why knowledge) that can be explicitly stated. It is the collection of past personal experiences that occurred at a particular time and place.

*Semantic: Semantic memory refers to general world **knowledge** that we have accumulated throughout our lives.*

Procedural: Procedural memory is a part of the long-term memory that is responsible for knowing how to do things, also known as motor skills. As the name implies, procedural memory stores information on how to perform certain procedures, such as walking, talking and riding a bike.

Activity 3 - Primacy and Recency (15 Minutes)

The mentor will hand out blank sheets of paper and ask the students to number it from 1-10. The mentor will then read off a list of 10 words, and ask the students to remember them in order to the best of their ability. There will be a delay of ten seconds after the last word is spoken, and then the mentor will tell the students to write down everything they remember, in order. The mentor will read off the list and have the students mark if they got it correct (right answer but wrong placement gets half credit). It will be very apparent that people remembered the first and last words, and things fade out in the middle.

Activity 4 - Mnemonic devices (Remaining Time)

To help remember things in the middle better, and arbitrarily long lists of information, we're going to teach them a modified form of the 'Mind Palace' or 'Method of Loci' technique. Mentors will read the story (in this folder) and ask the student to visualize it as much as possible. Detailed instructions are on the sheet. If there are enough people at the end, we can have a competition between groups.

Debrief (5 minutes)

A memory competition between groups

Schedule (expected time):

5 minutes **Warm-up Activity**

5 minutes **Lesson Introduction**

20 minutes **Activity 1**

20 minutes **Activity 2**

20 minutes **Activity 3**

20 minutes **Activity 4**

a minutes **Debrief**

Notes/Concerns/Issues: Ideas about tricks that can aid understanding, issues students are likely to have, classroom management during the lesson, specific points to emphasize, etc.