

Memory Unit
General Psychology
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Unit Outline:

This unit is intended to cover the psychological process of receiving, encoding, processing, storing, and forgetting memories. It is designed in such a way that the concepts build upon one another to produce a firm understanding of memory for the student. First, we have a general introduction to the way that psychologists think of memory by discussing the various types of memories humans can have. On our second day, we will learn about sensory and working memory systems in more detail. Day three and four will deal with long-term memory. Students generally find this information very interesting because it is directly applicable to the way they live their lives. By attaining an understanding of how we process and retrieve long term memories, students will better appreciate how to maintain accurate long-term memories as well as the deficiencies that are inherent in the average person's long-term memory systems. This unit, while intuitive, is largely new content for students in high school – unlike other classes that can presuppose general content literacy, the task of a psychology class is to transfer students' thinking from the colloquial terminology that we use to describe memory events to more academic vocabulary that psychologists have proven and defined. Therefore, I have chosen to use direct instruction to prime students for psychological thinking in the four major themes outlined above (memory systems, sensory vs. working memory, long-term processing, and long-term retrieval) followed by hands-on activities that lead students to apply these concepts authentically to their own lives.

Unit Rationale:

This unit is structured in this fashion to help students build their content knowledge and then apply that knowledge to real-world situations. First, we have to lay a foundation of content literacy by introducing key concepts in psychology. This foundation requires the bulk of the time for this unit plan because we do not have a great deal of time with which to delve into each concept. I have taken care to provide practical cases for as many concepts as possible so that students can make meaning from the jargon they are learning. Psychology, like many sciences, is keen on shortening concepts into confusing phraseology (visuospatial sketchpad, sensory register, episodic memory, etc.), so I have arranged the unit to break down these concepts and reinforce them with repeated usage, activities, projects, and a unit test. My goal for this unit is for students to be able to take these concepts and apply it to their lives directly, to improve their memory and the memory of those around them.

Goals and Essential Questions:

How do differences in processing and encoding encourage inaccuracies or strengthen memories?
How are memories created and stored biologically?
How does learning about memory help us apply better storage and retrieval strategies?

Unit Objectives:

1. Characterize the difference between shallow and deep (elaborate) processing and identify other factors that influence encoding.
2. Describe the operation of declarative, nondeclarative, sensory, short-term and working, and long-term memory.
3. Analyze the importance of retrieval cues in memory and explain the role that interference plays in retrieval.
4. Identify the brain structures most important to memory and relate difficulties created by reconstructive memory processes.
5. Describe the strategies for improving memory based on our understanding of memory and compare the processes that lead to inaccuracies in memory.

Unit Standards: (skills or understandings the students will learn in this unit)

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

IVB-1.2 Identify other factors that influence encoding.

IVB-2.1 Describe the operation of sensory memory.

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

IVB-2.3 Describe the operation of long-term memory.

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

IVB-3.2 Explain the role that interference plays in retrieval.

IVB-3.3 Relate difficulties created by reconstructive memory processes.

IVB-4.1 Identify the brain structures most important to memory.

IVB-5.1 Identify factors that interfere with memory.

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

IVB-6.1 Describe the processes that lead to inaccuracies in memory.

Unit Outline and Calendar			
Day	Length	Activity	Objective
1	5-10 minutes	Pre-Assessment	1, 2
1	45 minutes	Lecture/ Structured Note Taking – Classically conditioning Dwight	2
1	30 minutes	Worksheet – Multiple Memories	--
2	10-15 minutes	Warm-up – Type of memory	1, 2
2	20 minutes	Working Memory Lecture	2
2	10 minutes	Operation Span Task	3, 5, 2
2	20 minutes	Chunking Lecture and Video	3, 5
2	10 minutes	Exit Ticket – Sensory vs Working	1
3	10 minutes	Warm Up – Chunking Strategies	5
3	40 minutes	Mental Mapping Activity	5, 2
3	30 minutes	Lecture, Shallow vs. Deep Processing	1
3	10 minutes	Exit Ticket – Test Effect	3
4	10 minutes	Warm up – Shallow vs Deep Processing	1
4	40 minutes	Telephone Activity	3, 5
4	20 minutes	Lecture, Forgetting	4
4	10 minutes	Review for Test	ALL

5	50 minutes	Unit Test	ALL
5	40 minutes	Brain Games Video	4, 5

Assessments and Evaluations:

Pre-Assessments: write a brief response to the warm-up question.

Formative Assessments: throughout this unit I will be using Cloze notes and written responses in worksheets that I create for the lectures and activities. I understand that some teachers would rather have their students simply discuss their thoughts rather than making them be written, but I see a desperate need for writing in this student population. I intend to read and grade their responses using rubrics when indicated. The practical conventions of writing tend to be missing from students' work, so I will guide students towards better writing by conferencing with them briefly when appropriate. The exit tickets are intended to be a series of formative assessments; I will use them to judge where students need reteaching or reinforcement of certain concepts. I have built in a good deal of time in this unit to allow for reinforcement because foreign psychology concepts can sometimes be confusing at first for students.

Summative Assessments: This unit includes two major summative assessments designed to touch on two different sides of Bloom's Taxonomy. First, students will take part in an experiment/activity and then write an essay about their experience. Second, students will take an exam of multiple choice and short answer response items.

Differentiation:

This course is primarily an elective, so the first goal of the curriculum should be to welcome all students to the course. I understand that students come to the table with a variety of learning styles, so I have attempted to build in many different approaches to the same content. The scope of this unit is quite narrow – only four major topics are covered. With 90 minute class periods, this has allowed me a great deal of time to get students thinking on many different levels about the material. For students who enjoy abstract thinking, I have lectures that hone in conceptually on the material. For students who prefer more literal application, every class period has an activity or experiment that draws the material into reality. Psychology does not change much for students of varying backgrounds – we are all human and psychology views us all as one unit. However, I have included the mental cartography lesson as a means to show students that everyone has essentially the same wiring but a unique perspective. This is the job of psychology generally, but even more so in a unit focused on memory.

Accommodations:

First, review the seating arrangement. If all students with preferential seating are in their preferred seat, then ensure that they are nearby with students who will be helpful in this unit. Second, if any students are physically unable to complete activities, then provide them with access to a comparable assignment or activity. Finally, if any student needs assistance during the discussion period, it may be beneficial to give him/her a copy of the discussion questions beforehand so he/she can prepare responses. The unit test will be given to all students, but specific accommodations can be made if the need arises.