Memory Principles (Workbook pages 6-8)

Outline (50 minutes)
1. How the Brain Works Lecture – 5 minutes
2. Memory Principles Activity – 25 minutes
3. Name Game Activity (Time Permitting) – 5-15 minutes
4. Applying Memory Principles – 5 minutes
5. Homework Review – 5 minutes
6. Weekly Feedback – 5 minutes

Materials:
Workbook:
- Memory Principles (p. 6)
- Memory Activity Sheet (p. 7)

Homework:
- Continue practicing note-taking
- Bring course syllabus from selected course

Goals/Outcomes:
- To learn the memory principles and 3 stages of learning
- To learn some memory strategies for learning information
- To learn how to apply the memory principles to coursework

Activity 1: How the Brain Works Lecture, 5 minutes

Purpose:
- To practice note taking skills
- To introduce information on memory principles to be used in future sessions
Directions:

- Take notes on the following lecture “How the Brain Works” utilizing the note-taking strategy we learned.
- (Afterwards, students will generate questions in the margins and quiz themselves)
- (Write key words on the board as you go)

LECTURE NOTES:

Let’s review the 3 stages of learning:
1. Input (In this stage you are receiving new information.)
2. Organization (In this stage you are organizing and storing information.)
3. Output (In this stage you are retrieving and using information.)

In any basic Psychology class, you will learn about information processing. Let’s look at Atkinson and Shiffrin’s model for information processing and 10 memory principles to learn more about how the brain works.

(Draw a flow chart as you go. (INPUT) Sensory Register->(ORGANIZATION) Short Term Memory->Long Term Memory->(OUTPUT) Retrieval. Put the memory principles up on the board as you go as well. Use the board liberally as you lecture, for your visual learners)

The Sensory Register is the part of the brain that handles INPUT. Information (sights and sounds) enters here and is held very briefly. There are three memory principles that will move information to the next stage of learning:

1. Interest (In order to remember something thoroughly, you must first be interested in it. You must have a reason to learn it.)
2. Intent to remember (A key factor to remembering something is having a positive attitude that you will remember. You INTEND to remember it.)
3. Basic Background (Understanding new material depends a great deal on how much you already know about the subject. The more you increase your basic knowledge, the easier it is to build new knowledge on this background.)
Short Term Memory and Long Term Memory handle the ORGANIZATION stage of learning. Short Term Memory can hold 5-7 bits of information at a time. When it’s full, something has to go. Memory principles that help move information to Long Term Memory are:

4. Selectivity (determining what is important and selecting those parts to study and learn.)
5. Meaningful Organization (grouping ideas into some sort of meaningful categories or groups.)
6. Recitation (saying an idea aloud in your own words is probably the most powerful tool.)
7. Mental Visualization (making a mental picture of what needs to be remembered.)
8. Association (facts to be learned are associated with something familiar.)

Long Term Memory is our permanent knowledge base. Its capacity is limitless. We store so much in long-term memory that we sometimes have problems with retrieval.

Retrieval is the OUTPUT stage of learning. Once we have stored information in Long Term Memory, the memory principles that help us retrieve information are:

9. Consolidation (the brain needs time for new information to soak in. When you review your notes and generate questions you are using the principle of consolidation.)
10. Distributed Practice (A series of shorter study sessions distributed over several days is preferable to fewer but longer study sessions. When you quiz yourself on your notes as the class progresses, this is distributed practice.)

These 10 memory principles are outlined on page 6 in your workbook.

Discussion: We are going to learn strategies for each of the memory principles. Before we do, look at these notes and generate questions in the margins. Give yourself a quiz. Refer to your workbook page 16 for a copy of the memory principles. Memory principles will be part of our quiz next class.
Activity 2: Memory Activity, 25 minutes

**Purpose:**
- To demonstrate to the students that they have the ability to utilize memory principles on any subject

Directions:
- Turn to page 7 in your workbook
- We will learn all of these words in about 20 minutes
- Does anything jump out at you that will help us get these words organized?
- Do any of the words have anything in common with the other words in the list?
- *(Someone will notice that there are categories. Once they get one category, help them pull out the other 7. Write them on the board!)*
- We will use different memory strategies to learn the list.
- Let’s start with the name on the list.
- *(You MUST use recitation to practice the lists. It is important that they have a positive experience recalling the list of words, so that they will know that it WORKS! Don’t RUSH through these. Make it fun and interactive. Don’t move to the next category until you see that they have the first one in their minds.)*

**NAME** - To remember this name we’re going to use visualization and “sounds like.” Meg is the first name. It sounds like “egg.” I’m going to draw an egg on the board. Now for Leake, let’s visualize this egg with a crack in it. So, this egg leaks . . . **Meg Leake . . .Egg leak.**

*(Draw an egg on the board with a big crack in the middle.)*

**PLANETS** – Does anyone remember how you learned the planets in grade school? *(Wait for a response. If none, tell them.)* This strategy allows you to recall the planets AND remember them in the order from the sun! By storing the saying in your head, and practicing it, you will recall the planets.

*(Write the saying on the board)*

My (Mercury)

**Very (Venus)**

Educated (Earth)

Mother (Mars)
Just (Jupiter)
Served (Saturn)
Us (Uranus)
Nine (Neptune)
Pancakes (Pluto)

This is called a pneumonic sentence. *(You can write in the planets next to the words, or just leave it up to them to call them out!)*

Let’s recite the planets together. *(Not everyone will participate in the recitation. Don’t move on until everyone joins in the practice)*

Once again, what are the planets? *(Point to each word as they recite the planets.)*

**ANIMALS** – To remember this list of animals, we’re going to use a visualization that can work for lots of other things. It works because we can all visualize the rooms of a house. It also works because we are making it active and a little bit ridiculous. Your job is to listen and visualize.

*(You will not write anything on the board for this one. You do need to be very animated and dramatic using hand gestures and an expressive tone.)*

Imagine a house. When you walk into the living room, there is a lion lying on the couch reading a newspaper. There is a fireplace in the room with turtles walking all over the mantle. They’re marching up and down the narrow space in rows. Now, you go into the kitchen and sitting around the table are a bunch of donkeys playing poker. At the head of the table sits a shark, a card shark, all dressed up in his little dealer’s cap, smoking a cigar. On the stove is an eagle with his wings spread out. The eagle is overlooking the table watching the card game! The kitchen is pretty crowded, so you walk into the dining room. As you enter the dining room, there are hundreds of butterflies flying around the chandelier. They are all different kinds and colors. Below the chandelier is a big dining room table full of rabbits. They are hopping all over the dining room table. There are so many rabbits that they keep falling off the table. The last room on this floor is the bathroom. As you go in you see a huge elephant sitting on the toilet. On the windowsill, is a black cat stretched out in the sunshine. Like most cats, he’s looking for the least crowded place in the house. He would dearly love to jump out the window, but it’s closed.
Let’s go back to the front door and walk through the rooms together. *(Review the story with students.)* Who would like to volunteer to recite the animals without looking at any materials?

**MONTHS** – Which months do you find on the list? What do these months have in common? *(Answer: They all have 30 days.)* “30 days has September, April, June and November . . .” *(When you recite it, make it sound like a jingle.)*

Let’s all recite this. This works well as a tool because it has both a rhyme and a rhythm.

**STATES** - To remember these states, we’re going to use both visualization and association.

*(Draw this picture on the board as you go. Describe one state at a time and draw the symbol that goes with it. When you say the state, ask the students what they think of. You can alter your drawing, if they come up with other ideas. The following suggestions work well.)*

What do you think of when you think of Texas? Oil? Cowboys? Bush? Football? *(See what they say and go from there. Do this with all the states.)*

1. Texas – Draw a cowboy hat with oil spurting out of the top.
2. Tennessee – Draw a man (who is wearing the cowboy hat you just drew.) This man is a country and western singer at the Grand OLE Oprey and he is playing his banjo. *(Draw the banjo too!)*
4. Pennsylvania – Draw a pencil that is piercing the apple right through the center. PENNcil. Get it?
5. Indiana – Draw an Indian that is shooting an arrow right through the apple. INDIAN – INDIANa. Get it?
*(Review your picture with the students.)* Who is able to repeat the 5 states without looking?

**GROCERIES** –

*(Draw this picture on the board. You will draw the grocery item as you are talking about it.)*

Here is a car that you are driving to the grocery store. *(Draw car)* For a hood ornament, there is a head of lettuce. *(Draw lettuce as hood ornament)* Now imagine that there are tomatoes in orbit around the head of lettuce. *(Draw tomatoes around head of*
(lettuce) On the roof of the car is a carton of milk. Realize that it is open and is perfectly balanced. (Draw carton of milk on top of the car) We did place some napkins under the carton of milk in case it was to spill. (Draw napkins under milk carton) On top of the milk carton is a loaf of bread that is balanced. (Draw the loaf of bread on top of the milk carton)

(Repeat the story to the class.) Is there anyone who is able to repeat the story without looking?

**DATE** – 1492  (Ask who has a way to remember this year. Someone is bound to chime “In 1492, Columbus sailed the ocean blue.”)

**GREAT LAKES** – (Ask if someone has an acronym for the Great Lakes. **H-O-M-E-S** is what you are looking for here.) Which letter stands for which lake? Let’s all review it aloud without looking.

(H-Huron, O-Ontario, M-Michigan, E-Erie, S-Superior)

Before you take the quiz, let’s review everything we have learned. (Go over each category asking the group to recite each of the lists.)

- Turn to page 8 in your workbook, and see which words from the list you recall.
- Write down all the words you remember.

(Give them ample time)

There are a total of 39 words.

**Discussion:** Who was able to remember all 39 words? Can you think of any of your classes in which this may be useful? Put these ideas in your bag of tricks for future use. It’s important to use distributed practice to move information to long-term memory and have a way of RETRIEVING IT FOR THE TEST.

**Activity 3:** (if time permits) Name game activity, 8-15 minutes depending on class size

**Purpose:**
- To utilize a memory technique to learn classmates’ names

Directions:
(In the larger classes over 15, to save time, split them up into 2 separate groups. Move the group into a circle for this activity.)

- I am going to start by stating my name with an adjective in front of it with the same initial. Ex: Merry Meg.
- Each of you will have to start with your name and everyone else after that before you actually state your own.

**Discussion:** Ask the class which of the memory principles we used and for which part. Ex: Intent to remember, repetition. Ask them if they think they could apply it to any of their coursework. Turn to page 18 and see if you can remember. *(Stay in a circle for the next activity.)*

**Activity 4: Applying Memory Principles to the Question in the Margin Strategy, 5 minutes**

**Purpose:**

- *To learn how the memory principles apply to other strategies and their own coursework*

**Directions:**

- Turn to page 6 in your workbook.
- Look at all the memory principles.
- As we go through the list, write down an example of your own that you would apply to learning in your selected class. You don’t have to use all of them, but think about what might apply and how.

**Discussion:** We just used most of the memory principles and learned how they can work. Remember we are always moving through the 3 stages of learning. First, you receive the information in the input stage. Then you have to DO something with the information to organize it and store it. Finally, you have to retrieve and use the information. Let’s take a closer look at how they would apply to the question in the margin strategy you are using when you take notes. We’ll use questions in the margins of your texts in a strategy you will learn later.

Turn to page 6 in your workbook.

The first three principles apply to the input stage. *(Walk through each principle and the way it works in the q in the margin strategy.)* Write how you might apply this to your selected course.

Let’s look at the organization stage. Which memory principles help you move information into long-term memory in the organization stage? *(Walk through each of the 5, explaining*
the application to q in the margin, and ask them to write their own application for their course.

Finally, how does the q in the margin strategy help you with distributed practice and consolidation? How will you apply this in your course?

Homework:

- Continue practicing your note taking.
- Bring the textbook for your Master Student application course
- Complete #1 and #2 on page 12 of your workbook using the textbook from your application course
- Hand in a photocopy of notes with questions in the margins for your application course