Unit 6 Assignment – Memory, Thinking, Language, Sleep

Big Questions: How does the process of memory create a unique experience for each individual? How do language & cognitive processes work to influence our ability to think and problem solve?

Cognition and Language Unit Objectives:

- *Explain memory in terms of information processing and distinguish between short-term and long-term memory.*
- *Describe the nature of iconic and echoic memory.*
- *Explain the process of encoding and distinguish between automatic and effortful processing.*
- *Explain the importance of meaning, imagery, and organization in the encoding process.*
- *Describe the capacity and duration of long-term memory and discuss the synaptic changes that may underlie memory formation and storage.*
- *Distinguish between implicit and explicit memory and describe the role of the hippocampus in explicit memory.*
- *Contrast recall, recognition, and relearning measures of memory.*
- *Describe the importance of retrieval cues and explain what is meant by state-dependent memory.*
- *Explain what is meant by retrieval failure and discuss the effects of interference and repression on retrieval.*
- *Describe the nature of concepts and the role of prototypes in concept formation.*
- *Discuss how we use means of trial and error, algorithms, heuristics, and insight to solve problems.*
- *Describe how the confirmation bias and fixation can interfere with effective problem solving.*
- *Explain how the representativeness and availability heuristics influence our judgments.*
- *Describe the effects that overconfidence and framing can have on our judgments & decisions.*
- *Discuss how our beliefs distort logical reasoning and describe the belief perseverance phenomenon.*
- *Describe artificial intelligence and contrast the human mind and the computer as information processors.*
- *Describe the structure of language.*
- *Trace the course of language acquisition and discuss alternative theories of language development.*
- *Describe the research on animal communication and discuss the controversy over whether animals have language.*
- *Discuss the relationship between thought and language. (Whorf's linguistic relativity)*

Cognition and Language Overview

The cognition and language unit explores human memory as a system that processes information in three steps. Encoding refers to the process of putting information into the memory system. Storage is the purely passive mechanism by which information is maintained in memory. Retrieval is the process by which information is accessed from memory through recall or recognition.

This unit also discusses the important role of meaning, imagery, and organization in encoding new memories, how memory is represented physically in the brain, and how forgetting may result from failure to encode or store information or to find appropriate retrieval cues. The chapter discusses the issue of memory construction. How "true" are our memories of events? A particularly controversial issue in this area involves children's memories of sexual abuse.

Most of the cognition and language unit deals with thinking, with emphasis on how people logically-or at times illogically—use tools such as algorithms and heuristics when making decisions and solving problems. Also discussed are several common obstacles to problem solving, including fixations that prevent us from taking a fresh perspective on a problem and our bias to search for information that confirms rather than challenges existing hypotheses.

The unit also explores how computer systems have been constructed to simulate the neural networks of the human brain. By mimicking the ways in which human neural networks interconnect, computers enable scientists to study how human systems process sensations and memories and how the thought process works.

The rest of the unit is concerned with language, including its structure, development in children, use by animals, and relationship to thinking. Two theories of language acquisition are evaluated: Skinner's theory that language acquisition is based entirely on learning, & Chomsky's theory that humans have a biological predisposition to acquire language.

Unit 6 Reading Assignment(s)

- You are responsible for the reading listed below; it is meant to supplement the material discussed in class I cannot teach you everything. You should skim the chapter after we finish going over the different parts, and take notes on anything we did not cover.
- **OpenStax Psychology Textbook:** Chapters 7-Pages 1-16 & All of Chapter 8 (On Class Website)

Unit 6 Vocabulary Terms & Flip Book

Psychology is a term heavy course; you are responsible for the terms below. You will have vocabulary on the unit exam.

Unit 6 Flip Book: Each term should be on its own card. Each card will have the term ***thoroughly and clearly*** defined on the back. Each card will be **taped** into a **manila folder**, **numbered**, and turned in the day of the unit test.

PART II – PSYCHOLOGY ONE-PAGER ASSIGNMENT

Follow this format for your One-Pager and this format _ONLY!_

- Use _Unlined White Paper_.
- Use **COLORED** Pens, Pencils, or Markers.
    - **The _MORE VISUALLY APPEALING_ it is the more you will _LEARN_ and _REMEMBER_.**
        - It will be stored by and in different parts of your brain by using different colors, physically writing on it, physically drawing picture, etc.
- **Fill the ENTIRE PAGE. Fill the ENTIRE PAGE. Fill the ENTIRE PAGE. Fill the ENTIRE PAGE.**
- Be purposeful about the arrangement of your One-Pager.
    - For example, have a reason for using a certain color or for the placement of an object.
- Write _Two Quotations_ from the reading, activities, notes, or lectures about this unit.
    - They **MUST** be in **COMPLETE SENTENCES**.
- Use **THREE** _Visual Images_ _HAND_ DRAWN to create a central focus to your One-Pager. These should be in **BIG**, **BOLD**, and **COLORFUL!!!**
    - **Three** is the **minimum required**, you can always have more.
        - They should be related to the unit or part of unit, the more personal, funny, gross, etc. the better you will remember it.
- Place what you feel are the **FIVE** _Most Essential Vocabulary Words/Phrases/People_ around **EACH** image. **Five** is the **minimum required**, you can always have more.
    - These words/phrases/people should express the main ideas, your impressions, feelings, or thoughts about what you have seen, read, or learned in the unit or part of the unit.
- _Title_ the One-Pager as the _Main Idea_ of the One-Pager making it the _Biggest and Boldest Words_ on the page.
    - It does not have to be one word, or the word that we use to describe it in class, it can be something unique that helps you remember this unit or part of the unit the best.
- Write **TWO** _AP Questions_ on the **FRONT** of your One-Pager (this is like an AP Question FREE RESPONSE Question & need to be ones that will be answered in **MULTIPLE SENTENCES**) & answer **BOTH** of the on the **BACK** of the One-Pager using _Complete Thoughts & Sentences._
- **Write your name on the BACK!!! Write your name on the BACK!!! Write your name on the BACK!!! Write your name on the BACK!!! Write your name on the BACK!!!**