**Cognition**

**Memory:** learning that has continued over time

* **Information-Processing model:**
	+ Encoding: stimuli from environment is converted into a form the brain can understand
	+ Storage/Rehearsal: information is stored
	+ Retrieval: recalling stored memories
* **The Multi Store Model:**
	+ **Sensory Memory:** process everything we sense
		- Iconic Memory: fleeting visual images
		- Echoic Memory: auditory signals
		- Cocktail Party Effect: focus on one stimulus despite others
	+ **Short Term Memory:** information stored up to 30 seconds “scratch pad” stage
		- Chunking: combining bits of related information (112 343 453 226)
		- Maintenance rehearsal: repeating info to prolong presence in STM
	+ **Long Term Memory:** store information indefinitely
		- Episodic Memory: stories of our lives (experiences)
		- Semantic: memories drawn from common knowledge (name of states)
		- Procedural: memories of how to do something
* **Automatic processing:** brain’s ability to handle several stimuli at once
	+ **Implicit memories** (nondeclarative memory): memories we retain without conscious effort
		- Priming: using cues to activate hidden memories (how we retrieve memories from long-term storage)
* **Effortful processing:** encoding that requires attention and conscious effort
	+ Explicit memories (declarative memory): past knowledge consciously brought to mind
* **Recognition:** correct identification of previously learned material (multiple choice)
* **Recall:** direct retrieval of facts (fill in the blank)
	+ Serial Position Effect: first and last items in a list are more easily remembered than middle
* **Forgetting Curve:** initially rapid then slow
* **State-Dependent Memory:** memories are most efficient when individuals are in the same state of consciousness (ex. Under influence of drugs/alcohol)
	+ Mood-Dependent Memory: recall of info while in a mood similar to when it was acquired
	+ Context-Dependent Memory: same environment/context

**Thinking:** a process of reasoning in order to solve a problem

* **Two different ways of thinking:**
	+ Convergent thinking: questions that limit creativity, “how many letters are in the alphabet?”
	+ Divergent thinking: questions that require creativity, “how many different ways are there to use a feather?”
* **Problem Solving Methods:**
	+ Trial and Error: a process of trying solutions until one works.
	+ Algorithms: a systematic method to solve a problem that guarantees a solution.
	+ Heuristics: a “rule of thumb” to solve problems efficiently.
	+ Insight: a sudden realization of a solution to a problem.
	+ Intuition: effortless, automatic feeling that allow us to solve a problem quickly.
* **Mindset**- A mental stance to problems
	+ growth mindset: thinking that we have the ability to grow and improve.
	+ fixed mindset: thinking that people are set in stone and cannot improve.
* **Problems in Problem Solving**:
	+ Cognitive Biases: ways of thinking that steers us away from rational conclusions.
	+ Confirmation bias: the tendency to search for information that supports our preconceptions and ignore things that we don’t agree with.
	+ fixation: the inability to see or define a problem from a fresh point of view.
	+ Functional Fixedness: tendency to think of things only in terms of their usual function.
	+ Mental Set: a tendency to approach a problem in a particular way.
	+ Representative Heuristic: describes how we think of things that resemble other previous objects.
	+ Availability Heuristic: the likelihood of events based on their availability in memory.

**Language:** group processes in problem solving and decision making

* **The Basics of Language:**
	+ Phoneme:the smallest distinctive sound unit in a language (40 phonemes in English)
	+ Morpheme: smallest unit that carries some meaning
	+ Grammar: a set of rules that enables us to communicate with and understand others
	+ Syntax:determines the rules for combining or arranging words into grammatically sensible sentences
	+ Semantics: refers to aspects of meaning assigned to language
* **The Development of Language:**
	+ Overgeneralization: the application of grammar rules in instances to which they do not apply (ex. Daddy buyed me a present)
	+ Undergeneralization: process failing to adequately categorize items (ex. All four legged animals are dogs)
	+ Overextension: applying a word to a wide variety of similar items
	+ Underextension: using a word to define only one object as though it were a proper name
* **Theories of Language Acquisition:**
	+ Skinner: learned through association, reinforcement, social imitation, shaping, and prompting
	+ Chomsky:believed that language acquisition is innate from his observations that children create sentences they have never heard before and learning it too rapid to be explained solely by learning principles
	+ Whorf: Linguistic Relativity Hypothesis; idea that the language one uses determines the way one thinks and one's view of the world