Unit 3 Key Terms

**Brain plasticity:** When many parts of the cerebral cortex are not committed to specific functions yet leaving it with a high capacity for learning.

**Cerebral cortex:** Largest part of the brain accounting for 85% of its weight, divided into lobal regions that are used for specific purposes (e.g. parietal lobe synthesizes sensory data).

**Classical conditioning:** Pairing of a neutral stimulus with one that leads to a specific reflexive response.

**Differentiation theory:** Infants look for familiar, stable features in their environment.

**Mirror neurons:** Specialized cells in all motor areas of the cerebral cortex that create mimicking actions (e.g., a young child mimics the body movements of an adult).

**Neurotransmitters:** Messenger chemicals that travel between neurons- these messages are used to deliver specific information to parts of the body.

**Operant conditioning:** Children act upon something in their environment and as a consequence of the presence of a reinforcer or punishment the behavior will occur again or not.

**Synaptic pruning:** Neurons that are not stimulated (used) eventually lose their synapses making them unable to transmit or receive messages any longer.

**Accommodation:** The process of creating new schemes or modifying old ones integrating new information with old.

**Assimilation:** The process of using already learned information to make sense of something in the environment.

**Adaptation:** The process of creating new schemes while interacting in the environment and learning of new information without any integration of old information.

**Scheme:** Units of information organized into structures to help us to understand the world (e.g. we have a scheme for “mommy”).
Sensorimotor stage: Piaget’s first stage of cognitive development wherein infants/toddlers gain an understanding of the world using their sensory organs and movement.

Mental system: Components of the brain responsible for recall comprising the sensory store, working memory, and long-term memory.

Sensory register: Part of the mental system used to collect sensory data from the environment (parietal lobe coordinates this data).

Working memory: Combination of short-term memory (used for information storage) and processes (used to help understand the new information); when working memory is activated, we are aware of the contents of our thoughts; capacity is limited, and when too much information floods our working memory, we forget a lot.

Long-term memory: Unlimited capacity for storing all memories that are no longer conscious, but can be recalled as needed.

Joint attention: When a child and caregiver attend to the same item or event; this contributes to the development of early language.

Attachment: Social connection through feelings of love and/or belongingness (Bowlby and Ainsworth were major researchers in this field).

Basic trust vs. Mistrust: First stage of Erikson’s psychosocial theory of development; infants (up to age two) develop a trust that those in their environment will take care of them or not. Pertains to infants to age two years of age.

Emotional self-regulation: Ability to use cognitive and behavioral strategies to control level of emotional comfort during times of arousal.

Ethological theory of attachment: Bowlby’s theory that infants have an innate survival drive to attach to a primary caregiver.

Strange Situation: Ainsworth’s experiment evaluating children’s responses to separation from caregivers using different situations. Scenarios differed by time spent and proximity to the caregiver and researcher.
Autonomy vs. shame and doubt: Second stage of Erikson’s psychosocial development wherein children are allowed to make independent choices and are praised or punished for the result; children feel confident or ashamed of their performance.

Separation anxiety: Showing fear upon separation from caregiver.