Study Questions for Chapter 9

~ Define *language* and *grammar,* and discuss three major differences between human language and signaling systems used by other species.

~ Describe how *phonemes, morphemes,* and *grammatical rules* interact with one another to form a system of human *language,* and distinguish between the *deep structure* and *surface structure* of language.

~ Discuss language development with respect to the following: distinguishing speech sounds, vocabulary growth, and grammatical rules; describe how features of language development can be disentangled from cognitive development.

~ Compare the *behaviorist, nativist,* and *interactionist* explanations of language development.

~ Discuss the neurological specializations that allow language to develop.

~ Describe the successes and limitations of attempts to teach nonhuman animals, particularly apes, human language.

~ Describe several studies that provide support for the *linguistic relativity hypothesis.*

~ Define *concept* and discuss the following theories of concept formation: *necessity* and *sufficiency, family resemblance theory, prototype theory,* and *exemplar theory*.

~ Describe what a *category-specific deficit* is, and provide an example.

~ Compare *rational choice theory* with how most real-world decisions actually get made.

~ Describe the *availability bias,* provide an example, and distinguish between a *heuristic* and an *algorithm.*

~ Describe the *conjunction fallacy,* and provide an example.

~ Discuss how the use of the *representative heuristic* often results in ignoring important information about *base rates*.

~ Discuss *framing effects,* especially the *sunk-cost fallacy*.

~ Describe the basic tenets of *prospect theory*.

~ Compare the accuracy at which people judge frequency and probability, state the *frequency format hypothesis,* and provide an evolutionary account of this phenomenon.

~ Discuss the relationship between prefrontal cortex activity and risky decision making.

~ Describe the basic principles of *means-ends analysis,* noting how *analogical problem solving* is a component of the overall system.

~ Discuss findings regarding insight and how it develops, including how brain activity differs between insight and analytic problem solving.

~ Define *functional fixedness,* and illustrate how it hampers problem solving.

~ Define and compare *practical reasoning, theoretical reasoning,* and *syllogistic reasoning;* describe how different types of reasoning tasks activate different regions of the brain.