Day 7 Review

Physiology

What You Must Know:

1. The importance of homeostasis and examples (especially endocrine examples)
2. How feedback systems control homeostasis
3. One example of positive feedback and one example of negative feedback
4. How are nutrients reduced to molecules that can cross into the circulatory system
5. How is the respiratory surface structure related to function
6. Several elements of an innate immune response
7. The differences between B and T cells relative to their activation and action
8. How antigens are recognized by immune system cells
9. The differences in humoral and cell-mediated immunity
10. Why helper T cells are central to immune responses
11. Relate immune response to cell communication
12. Programmed cell death plays a role in normal development and differentiation (morphogenesis)
13. Cell differentiation results from the expression of genes for tissue-specific proteins and the induction of transcription factors
14. Interactions between external stimuli and regulated gene expression result in specialization of cells, tissues and organs
15. The anatomy of a neuron
16. The role of active transport in establishing the membrane potential of a neuron
17. How long-distance and short-distance signaling is done in neurons
18. The mechanisms of impulse transmission in a neuron
19. The process that leads to release of neurotransmitter, and what happens at the synapse
20. The brain serves as a master neurological center for processing information and directing responses
21. Different regions of the brain have different functions
22. Structures and associated functions for animal brains are products of evolution, and increasing complexity follows evolutionary lines
23. How the vertebrate brain integrates information, which leads to an appropriate response
24. Different sensory receptors respond to various types of input
25. Neurons communicate with muscle fibers to stimulate contraction
26. Interaction of cellular organelles leads to muscle contraction
27. Roots, stems and leaves interact in essential plant life functions
28. How plants respond to attacks by herbivores and pathogens