7th Grade Life Science Exam Review

Scientific Thinking

1. What is the difference between Independent variable and dependent variable?
2. What is the difference between scientific theories and scientific law?
3. Why are scientific theories modified?
4. What is the difference between repetition of experiments and replication of experiments?
5. List the characteristics that must be included in an experiment.

Classification of Organisms

1. How are the genus and species of an organism related? What makes these terms different?
2. How can you know if two different organisms have a common ancestor
3. What makes up a scientific name?

Cells and Cell Structure

1. How are eukaryotes different from prokaryotes? Give examples of each.
2. What is the difference between Unicellular: multicellular?
3. What makes plant cells and animal cells similar? Different?
4. What is the level of organization in the body from smallest to largest?
5. What is the role of the nucleus?
6. What is the role of the mitochondria?
7. What is the purpose of photosynthesis?\
8. What is the purpose of cellular respiration?
9. How are photosynthesis and cellular respiration different and the same?
10. What are the three parts of the Cell theory?

Human Body

1. How is the small intestine different from the large intestine?
2. What are the functions of the skeletal system?
3. What are the functions of the excretory system and which organs are involved?
4. How do the parts of the skeletal system and the nervous system interact?
5. How do bronchi and alveoli help us breathe?
6. What are the differences between mechanical and chemical digestion? Where do these occur in the human body?

7th Grade Life Science Exam Review- Part 2

1. What is the order of the digestive system starting with the mouth?
2. What is the path of oxygen through the body?
3. Why would a person need to use a dialysis machine?
4. Why would a doctor prescribe a patient antibiotics?
5. What type of organism is a tapeworm? Why?
6. How are these terms different: **autoimmune** and **infectious**?

Evolution and Natural Selection

1. What factors can cause an organism to become extinct?
2. Why did finch beaks adapt according to Darwin?
3. What are the differences between: adaptation, evolution, selection and variation?
4. Why do organisms adapt?

Genetics, DNA, and Heredity

1. You’ll need to be able to fill in a Punnett Square correctly.
2. What is the difference between recessive and dominant traits? Give an example.
3. What are the differences between sexual and asexual reproduction?
4. You need to know how to read a Pedigree…What do the shaded areas mean? What do the circle and square represent?
5. What does DNA determine? Describe its structure.
6. In mitosis, why is DNA replication important?
7. What is the definition of an allele?
8. What are the nitrogen bases of the DNA helix? How do they pair up?

Interactions Among Organisms

1. Define: mutualism, commensalism, predation, and parasitism. Give examples of each.
2. What is a producer? Give an example.
3. In a food web, what does the direction of the arrows mean?
4. Why have Florida Panther population gone down?
5. How does a limiting factor affect the population of an organism?
6. What is the difference between abiotic and biotic factors? Give examples.
7. What are the sources of carbon in the atmosphere?
8. What is produced as a result of photosynthesis?
9. What is the purpose of cellular respiration?
10. What is the original source of energy in any ecosystem? Why?
11. You will need to be able to read and answer questions about a picture of the carbon cycle.