Benchmark Study Guide – Quarter 2

A. Introduction Unit:

1. Scientific Method: Know the definitions of the following vocabulary:

 variable

 controlled variable

 control group

 controlled experiment

 independent variable

 dependent variable

 experimental group

2. List the 6 steps of the scientific method in order.

3. What is the difference between a controlled variable and a control group?
4. How are independent variables and dependent variables different?

5. What is the difference between an inference and an observation?

6. What is the difference between a qualitative observation and a quantitative observation?

B. Unit 1 - Classification:

 1. Know the definitions of the following vocabulary:

Autotrophic
 Heterotrophic
 Eukaryote
 Prokaryote
 Multicellular
 Unicellular
 Dichotomous key (know how to use it)

2. Know the 6 characteristics of living things.

3. Know the levels of the classification system from largest to smallest. (King Phillip…)

4. What are the 3 parts of the Cell Theory?

5. Know the characteristics of each of the Six Kingdoms of living things. **Circle** the answer for each kingdom regarding the number of cells, presence of a nucleus, and type of nutrition.

Bacteria multicellular/unicellular prokaryotes/eukaryotes autotrophic/heterotrophic

Protista multicellular/unicellular prokaryotes/eukaryotes autotrophic/heterotrophic

 Fungi multicellular/unicellular prokaryotes/eukaryotes autotrophic/heterotrophic

 Plantae multicellular/unicellular prokaryotes/eukaryotes autotrophic/heterotrophic

 Animalia multicellular/unicellular prokaryotes/eukaryotes autotrophic/heterotrophic

C. Unit 2 - Cell Organelles and Processes:

 Know the definitions of the following vocabulary:

 Cell membrane

 Cytoplasm

 Nucleus

 DNA

 Mitochondria

 Cellular respiration

 Vacuole

 Chloroplast

 Photosynthesis

D. Unit 2 - Cell Transport:

 1. Know the definitions of the following vocabulary:

 Diffusion

 Endocytosis
 Exocytosis
 Osmosis
 Active Transport
 Passive Transport

2. From least complex to most complex, know the correct order of the levels of organization of a multicellular organism. Be sure to know the definition of each term.

E. Unit 3 - Organ Systems:

1. Know the functions of the following systems:

 Integumentary
 Muscular
 Skeletal
 Excretory

2. Know the definitions of the following terms:

 Voluntary muscles
 Involuntary muscles
 Skeletal muscles
 Smooth muscles
 Cardiac muscles

3. Which organs are involved in the excretory system? How?
4. What are the three main parts of the brain and their functions?
5. What is the function of lymph nodes?
6. What is a virus and why is it not considered to be a living thing?