**Advanced Biology Introduction Unit Test Worley**

Period 5 (Red Day) Tuesday 9.16.14

Periods 2 & 6 (Blue Day) Wednesday 9.17.14

\*I will be available Monday afternoon (4-4:30) and Tuesday morning (8:15-8:45), and Wednesday during CHAT period to answer your questions or help you study.

**What to know & understand**

\*Biology root word meanings (also be able to use them to determine the meaning of vocabulary words)

\*Experimental Design and Scientific Method—see notes sheet (posted on the

 website if you need it)

\*The scale of life

\*The tenants of the Nature of Science

\*The characteristics of living things

**Some especially important root words**

\*Homeo

\*Therm

\*Hetero

\*Chloro

\*Cyto

\*A or an

\*aerobic

\*macro

\*micro

\*Phobic

\*philia

**Experimental Design**

\*Make sure you can identify independent variables, dependent variables, constants and controls

\*Know the different between quantitative and qualitative variables

 Hints: “I change the IDV”

 DV—Data

 The effect of the IDV on the DV

\*Be able to write a hypothesis for a problem

**The scale of Life—know the relative size of the following**

1. Quark
2. Subatomic particles (proton, neutron, electron)
3. Atom
4. Molecules and compounds
5. Macromolecules
6. Cell organelles
7. Cell (unicellular organism)
8. Tissue
9. organ
10. organ system
11. multicellular organism
12. population
13. community
14. ecosystem
15. biome
16. biosphere
17. Planet Earth
18. Solar system
19. Galaxy
20. universe

**Nature of Science**

\*Science is based on observation and inference

\*Science is subject to change

\*Science is subjective and theory laden

\*Science is influenced by our perceptual framework

\*Science is creative

\*Theories do not become laws (understand the similarities and differences between theories and laws)

**Understand the Characteristics of Life**

1. Living things are based made up of cells
2. Living things are based on a universal genetic code
3. Living things adapt and respond to their environment
4. Living things use materials and energy
5. Living things evolve (change as a group over generations)
6. Living things grow and develop
7. Living things reproduce
8. Living things maintain homeostasis
9. Living things are organized

**Terms to understand**

\*See root word worksheet—the language of science (posted on website)

\*Hypothesis

\*Theory

\*Law

\*Conclusion

\*Observation

\*Inferences

\*Independent variable

\*Dependent variable

\*Homeostasis