BIOLOGY- Study guide

Unit 1: Introduction to Biology

HINTS:

- Look at Key Concepts and study guides for each chapter. Study vocabulary in assigned sections.
- Use chapter assessments for practice.
- Rewrite or type your class notes, reread input and output pages, make additions to output pages, continue to convert notes to pictures, concept maps, etc.
- Review labs, handouts, quizzes, etc. (see me to view quizzes)
- Teach concepts to friends, family
- If you like flash card, consider QUIZLET

TEST FORMAT:

- part scantron- *BRING SHARP #2 PENCILS!*
- short answer, essay

Essay: Take a look at the *Adoration of Jenna Fox*. Describe briefly what happened to Jenna after her accident and what her new body was made of. Based on your knowledge of the characteristics of life, is Jenna Fox alive? Please name at least 3 of the characteristics of life that she may or may not have.

Topics to study

Chapter 1 (1-2, 1-3)

1. Describe and recognize the steps of Designing an Experiment
2. Explain the Characteristics of Living Things and how things are judged as living or nonliving.

Chapter 2 (2-1, 2-2, 2-3)

3. Be able to draw an **atom** and label its particles and their charges.
4. Explain how positive and negative **ions** are formed.
5. Compare **covalent** and **ionic bonds**.
6. Explain how **polarity** and **hydrogen bonding** creates special properties of water, such as **cohesion**, **adhesion**, **surface tension, universal solvent**.
7. Define **solution** and identify **solutes** and **solvents**.
8. Identify **acids** and **bases** on the **pH scale**
9. Explain what pH measures, what a **buffer** and an **indicator** are.
10. Describe a **neutralization** reaction.
11. Explain the uniqueness and importance of carbon.
12. Define and explain the relationship between **monomers** and **polymers**.
13. Compare basic functions of carbohydrates, proteins, lipids, nucleic acids.