Name_____Date_____Hour_____

Biology

Guided Reading Questions   Chapter 1-2   The Nature of Science

1. What is science?

2. What is the difference between a theory and a law? Can one ever become the other?

3. What is pseudoscience? Give an example of a pseudoscientific topic.

4. How is pseudoscience different from real science?

5. What is peer review? What is its purpose?

6. What is meant by the term 'ethics'? Why is this important to scientists?

Guided Reading Questions   Chapter 1-3   Methods of Science

7. How is an observation different from an inference?

8. What's a hypothesis? According to the text, what did Dr. Wiley hypothesize about exercise and an air force pilot's ability to withstand G-forces?

9. What happens if data does not support a hypothesis?

10. What is the difference between the control group and the experimental group?

11. Define independent variable

12. Define dependent variable

13. What's a constant?

14. What are the two types of data scientists collect during an experiment? Give two examples of each type.

15. How do scientists organize their data? What is the purpose of analyzing the data from an experiment?

16. Examine figure 16, based on the patterns seen in the graph, what do you think the mass of the anole will be at 21 days?

17. Answer the following from the section review on pg 21
    a. Why can an observation cannot be an inference