

Study Guide
Intro to Biology

Name _____
Block _____

Please use this study guide as you prepare for the test. It will be very helpful to you. You will need to collect the main ideas from many of the worksheets, labs and projects that we worked on in this chapter to complete this study guide. Save the study guides to prepare for the final exam. Please see me during class if you need additional help and would like to schedule time to get help. *Italicized questions do not require a response.*

1. Biology is the study of _____.
2. (What level of biological organization?)
 - a. In humans, skin is an example of _____, because it is made up of layers of skin tissues (each layer being comprised of similar cell types).
 - b. Skeletal muscle is an example of _____.
 - c. Your heart is a(n) _____.
 - d. Red blood cells are examples of this level of biological organization:
_____.
 - e. Collectively, your blood, veins, arteries, and heart are a(n) _____.
 - f. Collectively, red blood cells (erythrocytes), white blood cells, and the clear plasma is _____.
 - g. The simplest level of organization that can support life _____.
3. Know how to calculate total magnification when the:
 - a. Objective lens = 40 and eyepiece = 10, total mag = _____
 - b. Objective lens = 10 and eyepiece = 18, total mag = _____
 - c. Objective lens = 100 and eyepiece = 10, total mag = _____
4. The function of the diaphragm on a microscope is to:
5. List the steps on how to focus an object. Which 2 parts are never used together?
6. What is field of view and how does it change when you increase magnification?
7. What causes what to happen?
Is it: A. metabolism drives homeostasis OR IS IT
 B. homeostasis drives metabolism

Tell why:

8. Interpret data: An observation uses one of your five _____, but an inference uses your pre-existing knowledge to draw a _____. In other words, a(n) _____ is a conclusion drawn from the data that does not rely on direct observation.
9. A hypothesis is an if- then statement that can be _____.
10. a. What is the independent variable in an experiment? How is it different from the dependent variable?
- b. How many independent variables should a controlled experiment contain? Why?
- c. In an experiment, what is the control?
- d. Which variable is “what you did” to invoke a change?
- e. Which variable gets measured because it “depends on” what you did?
11. Put the following alphabetic terms into “size” order:
atom, cell, organ, organ system, organelle, tissue
12. *Know the features of living things* and how to apply them. For example:
- a. chase a rabbit and it runs, what did the rabbit do? _____
- b. eat a burger, digest it and use it for energy _____.
- c. keep the pH of your stomach at pH=2 _____.
- d. get taller and change body form _____.
13. Compare Qualitative and Quantitative data:
14. *Know and understand all notes from class! Also, you should review and understand all homework questions.*
15. *Know all parts of the scope and their functions- see the scope coloring sheet and microscope lab.*
16. *There will be a short answer question about a main chapter concept: living things.*

Knowing this information will guarantee you a passing grade, applying it correctly will guarantee you an A.