

Date: _____

Chapter 1 Review

When answering questions, pay attention to **task words**. These are the action words that tell you how you should respond to a question. Below are some common examples that you will see in science.

- **Compare** - Identify the characteristics or qualities that two or more things have in common. You should point out the differences as well.
- **Contrast** - Point out the differences between two things (but probably point out their similarities as well)
- **Define** - Make a statement about the meaning or interpretation of something. Give enough detail that it can be distinguished from similar things.
- **Describe** - Give details about the main aspects of an idea, topic, or sequence of events. Be as thorough as possible.
- **Explain** - Tell how things work, or how they came to be the way they are. You will often need to "describe" as well.
- **List, or Identify** - Provide a list of items or topics
- **Justify** - Express a valid reason for coming to a particular conclusion.

Review Questions

1. List the three statements of cell theory.
2. Sketch a simple animal cell, and a plant cell.
 - a. Which organelles are found in both animal and plant cells?
 - b. Which organelles are found only in plant cells? What is their function?
3. Describe the difference between mitochondria and chloroplasts.
4. How are genes different from chromosomes?
5. What is a mutation? Are all mutations harmful?
6. What is DNA screening? List two reasons why people would want to undergo DNA screening, and describe examples of types of DNA screening available.
7. Describe the differences between a transgenic organism and a cloned organism.
8. What are osmosis and diffusion? How are they affected by concentration?
9. Why is it important that a cell membrane be semi-permeable?
10. Sketch and label the four phases of mitosis. Describe the major events of each of the four phases of mitosis.
11. How is cytokinesis different in animal cells as compared with plant cells?
12. Describe what happens during the other parts of the cell cycle (other than cell division). What is this period called?
13. What is the purpose of cell cycle checkpoints? List three examples of when a cell should not be able to pass a checkpoint.
14. What normal sequence of events occurs if a cell fails a checkpoint?
15. What change in normal cell behaviour can lead to tumours?
16. Explain the difference between a benign tumour and a malignant one.
17. How are carcinogens related to cancer? Identify an example of a carcinogen.