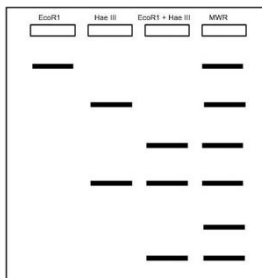


Unit 1 Review: Levels of Organization, MR. ROUGH, Domains/Kingdoms, & Biomolecules

1. What is a theory?
2. When would a theory need to be changed?
3. How are a theory and a hypothesis related?
4. Science relies on having a _____ hypothesis.
5. Incorrect Hypothesis: I believe that plants will grow 10 cm when placed in direct sunlight.
Correct Hypothesis: _____
6. How would you graph the following information? Label each axis.

Solution	Concentration of acid	Depth agar dissolved
A	0%	2 cm
B	1%	2 cm
C	2%	2 cm
D	3%	3 cm

7. Name the 7 characteristics of life.
8. Groups of individuals of the same species that live in the same place at the same time is called a _____?
9. List the order in which your body uses biomolecules.
10. What are the 4 biomolecules and their functions?
11. If there are 30 Adenine's in a DNA molecule, how many Guanine's Cytosine's and Thymine's are also in this same DNA molecule?
12. What does pathogenic mean? (or being a pathogen?)
13. The process by which organisms keep their internal conditions constant is called _____.
14. List the elements found in each of the 4 biomolecules.
15. What are the monomers of each of the 4 biomolecules?
16. What can starch be broken down into?
17. If your body has 25 grams of lipids, how many calories will you burn before you begin to burn proteins?
18. Which part of the DNA molecule is responsible for the coding of traits in ALL organisms? (Hint: Is it the sugar, phosphate or nitrogen bases?)
19. The picture below is an example of gel electrophoresis, which is used to compare bands of DNA. What biomolecule does gel electrophoresis analyze?



20. Name the 4 kingdoms of Domain Eukaryota.
21. Are all 4 kingdoms in Domain Eukaryota Prokaryotic or Eukaryotic?
22. What is different in the cell walls of Kingdom Archaeobacteria and Kingdom Eubacteria?
23. Which domain is thought to be the ancestor of eukaryotic organisms?
24. How are Fungi different from plants?
25. What is the base pairing rule of DNA and RNA?
26. What is the correct order of the levels of organization?
27. The smallest unit of living matter in Biology is the _____.
28. Biology is the study of _____.

29. Mrs. Sanchez is interested in growing tomatoes. She is unsure if she should use a fertilizer on her plants. She sets up the following experiment with these conditions: each tomato plant is in a separate container, each plant will be watered 100 milliliters every other day, and each plant will receive 6 hours of direct sunlight a day. Plant #1 will be given 2.5 grams of fertilizer mixed into the water while plant #2 will not be given the fertilizer.

- a. Why is Mrs. Sanchez including plant #2 in her experiment? _____
- b. Name at least 2 control variables. _____
- c. What is the independent variable? _____
- d. What is the dependent variable? _____

30. For her science fair project, Maya purposes the following: "I see that some recipes for bubble blowing solutions have glycerin and others do not. I want to blow the largest bubbles possible. I will use solutions with 0%, 5%, 10%, and 15% glycerin in my bubble blowing solutions."

- a. Name the control. _____
- b. What is the independent variable? _____
- c. What is the dependent variable? _____

31. You want to determine the effects of caffeine on mice by measuring their wheel-running times. The mice are given 0%, 2%, 4% and 6% caffeine in their water.

- a. What is the independent variable? _____
- b. What is the dependent variable? _____
- c. What is the control? _____