

Name _____ Date _____ Per _____

BIO CP FALL FINAL REVIEW PT. 1
Seven Themes, Metrics, Scientific Method, Digestion, Organic Compounds

Seven Themes

1. List the seven themes of biology:

2. List the seven properties of life:

3. The sum of all the chemical reactions carried out in an organism is called what?

4. Toads that live in hot, dry regions bury themselves in the soil during the day. What theme of biology does this describe?

Metrics

1. What are the basic metric units of:
 - a. Mass
 - b. Volume
 - c. Length
 - d. Temperature
 - e. Time

2. What are the instruments used to measure:
 - a. Mass
 - b. Volume
 - c. Temperature
 - d. Length

3. List the metric prefixes in order:

4. 1.435 cm = _____ mm
5. 45.3 km = _____ m
6. 4,500 mg = _____ g
7. 0.075 m = _____ cm
8. 86.32 mm = _____ cm
9. 0.000726 cm = _____ km

Scientific Method

1. List the steps in the scientific method in order:
2. In which step would you do an experiment when needed?
3. In which step do you form an experimental group and control group?
4. In which step do you make an “educated guess”?

Homer wants to know if radioactive slime can clean his shower. He sprays half of his shower with the slime, and the other half of the shower with water. He waits overnight. The next morning he sees that half of the shower that he sprayed with the radioactive slime was much cleaner than the half of the shower that was not sprayed.

5. Which is the control group?
6. Which is the experimental group?
7. What is the independent variable?
8. What is the dependent variable?
9. To which group is the independent variable applied?

SpongeBob noticed that his favorite pants were not as clean as they used to be. His friend Sandy told him that he should try using Clean-O detergent. SpongeBob made sure to wash one pair of pants in plain water and another pair in water with the Clean-O detergent. After washing both pairs of pants a total of three times, the pants washed in the Clean-O detergent did not appear to be any cleaner than the pants washed in plain water.

10. What was the independent variable?
11. What was the dependent variable?
12. What was the control group?
13. What was the experimental group?
14. What was SpongeBob’s conclusion?

Digestion Review

Fill in the digestive tract:

_____ → _____ → _____ →
_____ → _____ → _____

1. What are the four functions of the digestive system?
2. What are the two types of digestion?
3. The mouth chemically digests food using what enzyme?
4. What does this enzyme break down?
5. The mouth mechanically digests food using what?
6. What is the muscle that opens and closes the stomach?
7. The stomach produces what enzyme?
8. What does this enzyme break down?
9. The stomach produces what substance (pH = 2)?
10. How does an ulcer occur?
11. What is the main function of the small intestine?
12. What are the finger-like structures on the inside of the small intestine called?
13. What are the three divisions of the small intestine?
14. What is another name for the large intestine?
15. What is the main function of the large intestine?
16. Too much water absorption in the large intestine results in what?
17. Too little water absorption in the large intestine results in what?
18. What is the main function of the liver?
19. What is the main function of the gallbladder?
20. What substances does the pancreas secrete?
21. What does bile do?
22. What is the model used to explain enzyme activity?
23. An enzyme and the _____ meet at the enzyme's _____.
24. What is the pH of an acid?
25. What is the pH of a base?
26. An acid of pH = 3 is _____ times more acidic than an acid of pH = 6.

Organic Compounds

1. What is a monomer?
2. What is a polymer?
3. What are the functional groups in proteins?
4. What is the indicator used for lipids?
5. What is the indicator used for proteins?
6. What is the indicator used for carbohydrates?
7. What are the three monosaccharides?
8. What is the molecular formula for a disaccharide?
9. What are the three parts of a nucleic acid?
10. What are the four bases in nucleic acids?

	Carbohydrates	Lipids	Proteins	Nucleic Acids
Elements				
Monomer				
Polymer				
Examples				
Special features				