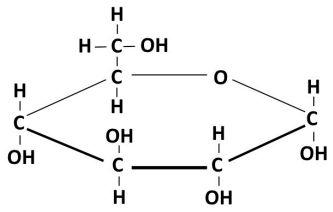
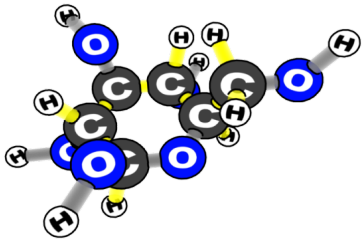
Name _____ Teacher _____ Date _____

2.3: Molecules in Cells Quiz

These questions are about a kind of sugar molecule, glucose. Here are three different ways of showing a glucose molecule.



$C_6H_{12}O_6$



1. What atoms are in the glucose molecule? (Circle one or more than one)

Hydrogen Calcium Carbon Nitrogen Oxygen Helium Iron Sodium

b. After this molecule is eaten by an animal, will the atoms still exist inside the animal?
Circle one: YES NO

c. Explain your answer.

_____

_____

_____

_____

2. Does the glucose molecule have chemical energy?
Circle one: YES NO

3. How did you decide if the glucose molecule has chemical energy?

_____

_____

_____

_____

4. To the right is the nutrition label for peanut butter.
List the three most important kinds of organic molecules in peanut butter:

_____

_____

_____

5. Does peanut butter have chemical energy?
Circle one: YES NO

Peanut Butter

Nutrition Facts

Serving Size (100g)
Servings Per Container

Amount Per Serving

Calories 590	Calories from Fat 450
	% Daily Value*
Total Fat 50g	**77%**
Saturated Fat 8g	**40%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 15mg	**1%**
Total Carbohydrate 22g	**7%**
Dietary Fiber 8g	**32%**
Sugars 9g	
Protein 24g	

Vitamin A 0% • Vitamin C 0%
Calcium 4% • Iron 10%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

		Calories:	2,000	2,500
Total Fat	Less than		65g	80g
Saturated Fat	Less than		20g	25g
Cholesterol	Less than		300mg	300mg
Sodium	Less than		2,400mg	2,400mg
Total Carbohydrate			300g	375g
Dietary Fiber			25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

Explain your answer. How do you know?

6. Answer the following true-false questions:
   a. TRUE FALSE All cells contain water.
   b. TRUE FALSE All cells contain minerals such as sodium and potassium.
   c. TRUE FALSE Cells can get energy from water.
   d. TRUE FALSE Cells can get energy from minerals.

Explain your answer to parts c and d. Can water and minerals be sources of energy for cells? Why or why not?