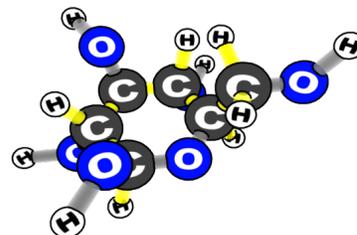
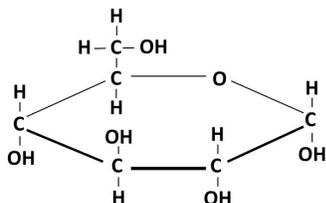


2.3: Molecules in Cells Quiz

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



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:

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	

5. Does peanut butter have chemical energy?

Circle one: YES NO

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?
