

Teacher _____ Period: ____ Grade ____ Date _____ Your initials ____

PLANTS UNIT PRE-TEST

1. Answer these questions about what happens when a plant grows.



Do you think that materials (solids, liquids, or gases) are going into the plant? (circle one answer below) Yes No I'm not sure	Do you think that energy is going into the plant? (circle one answer below) Yes No I'm not sure
What materials do you think are going into the plant?	What forms of energy do you think are going into the plant?
Do you think that materials (solids, liquids, or gases) are coming out of the plant? (circle one answer below) Yes No I'm not sure	Do you think that energy is coming out of the plant? (circle one answer below) Yes No I'm not sure
What materials do you think are coming out of the plant?	What forms of energy do you think are coming out of the plant?
How do you think that materials are changing inside the plant?	How do you think that energy is changing inside the plant?
What are you not sure about in your answers? Explain what you need to know to answer these questions better.	

2. Answer these true-false questions:

True False Carbon is a kind of atom.
True False Carbon is a kind of molecule.
True False There is carbon in a tree's leaves.
True False There is carbon in a tree's roots.
True False There is carbon in the wood of a tree's trunk.

3. Grass needs energy to live and grow. How does it get its energy?

Which of the following statements is true? Circle the letter of the correct answer.

a. ALL of the grass's energy came originally from sources outside the plant, OR b. SOME of the grass's energy was made by the plant as it grew.
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Circle the best choice to complete each of the statements on the next page about possible sources of energy from outside the grass.

How much of the grass's energy come from AIR?	All or most	Some	None
How much of the grass's energy come from SUNLIGHT?	All or most	Some	None
How much of the grass's energy come from WATER?	All or most	Some	None
How much of the grass's energy come from SOIL NUTRIENTS?	All or most	Some	None

Explain your choices. How does the grass get its energy?

4. A mature oak tree can have a mass of 500 kg, or more, even after all the water in the tree is removed. Yet it starts from an acorn that weighs only a few grams. Where did this huge increase in mass come from?

Which of the following statements is true? Circle the letter of the correct answer.

- a. ALL of the increase in mass came from matter that was originally outside the tree, OR
 b. SOME of the increase in mass came from matter that the tree made as it grew.

Circle the best choice to complete each of the statements about possible sources of mass from outside the tree.

How much of the increase in dry mass comes from the AIR?	All or most	Some	None
How much of the increase in dry mass comes from SUNLIGHT?	All or most	Some	None
How much of the increase in dry mass comes from WATER?	All or most	Some	None
How much of the increase in dry mass comes from SOIL NUTRIENTS?	All or most	Some	None

Explain your choices. How does the oak tree gain mass as it grows?

5. When a tree is alive it has energy stored in its living parts (roots, trunk, branches and green leaves). When the tree dies all the parts are still there (including fallen brown leaves). How much of the energy stored in the living tree is still there in the dead tree?

- a. ALL of the energy
 b. MOST of the energy
 c. SOME of the energy
 d. A LITTLE of the energy
 e. NONE of the energy

Explain your answer.

What kinds of energy are stored in the living tree? Where did they come from?

What kinds of energy are stored in the dead tree (if any)? How are they connected to the energy in the living tree?