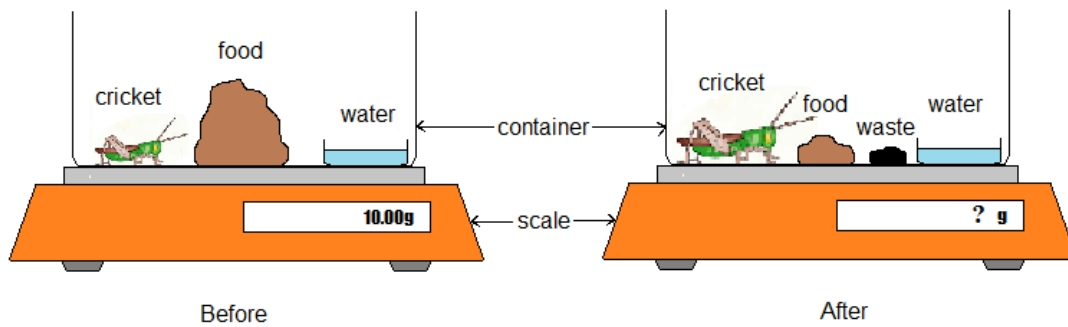


ANIMALS UNIT PRE-TEST AND POST-TEST

1. The following is an experiment regarding animal growth.



Suppose we put a cricket in a container with plenty of food and make sure that it always has the same amount of water. The container is NOT sealed. Gases and water are the only things that can get in or out. At the beginning of the experiment, the container with cricket, water, and food weighs exactly 10 g.

At the end of the experiment, the cricket has eaten some of the food and gotten bigger. Some of the cricket's waste (feces or poop) is also in the container. How much would you expect the container (with cricket, food, water, and waste) to weigh?

- a. More than 10 g.
- b. Still exactly 10 g.
- c. Less than 10 g.

Explain the reason for your prediction.

2. When a girl breathes, she breathes in air that has more oxygen, and she breathes out air that has more carbon dioxide. Where in her body does the carbon dioxide come from? Answer True or False.

True	False	Some of the carbon dioxide comes from the girl's LUNGS.
True	False	Some of the carbon dioxide comes from the girl's HANDS.
True	False	Some of the carbon dioxide comes from the girl's BRAIN.

Explain how the carbon dioxide is produced in the girl's lungs, hands, and/or brain. Explain where the carbon atoms in the carbon dioxide come from if you can.

3. 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 an insect's muscles.
True	False	There is carbon in an insect's stomach.
True	False	There is carbon in an insect's shell.

4. When a monarch butterfly caterpillar hatches out from its egg it is tiny, but it grows into a large caterpillar more than 2 inches long. Where does the caterpillar's 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 caterpillar, OR
b. SOME of increase in mass came from matter that the caterpillar made as it grew. |
|---|

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

How much of the caterpillar's mass came from the AIR?	All or most	Some	None
How much of the caterpillar's mass came from SUNLIGHT?	All or most	Some	None
How much of the caterpillar's mass came from WATER?	All or most	Some	None
How much of the caterpillar's mass came from FOOD?	All or most	Some	None

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

5. Fat is mostly made of molecules such as stearic acid: $C_{18}H_{36}O_2$.

Decide and circle whether each of the following statements is true (T) or false (F) about what happens to the atoms in a man's fat when he exercises and loses weight.

True	False	Some of the atoms in the man's fat are incorporated into carbon dioxide in the air.
True	False	Some of the atoms in the man's fat are converted into energy that he uses when he exercises.
True	False	Some of the atoms in the man's fat are burned up and disappear.
True	False	Some of the atoms in the man's fat are converted into body heat.
True	False	Some of the atoms in the man's fat are incorporated into water vapor in the atmosphere.

Explain your answers: What happens to the atoms in a man's fat when he exercises?

6. When a bird is alive it has energy stored in its living parts (muscles, fat, blood, etc.). When the bird dies all the parts are still there, but no longer alive. How much of the energy stored in the living bird is still there in the dead bird?

- | |
|--|
| 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 answers.

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

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