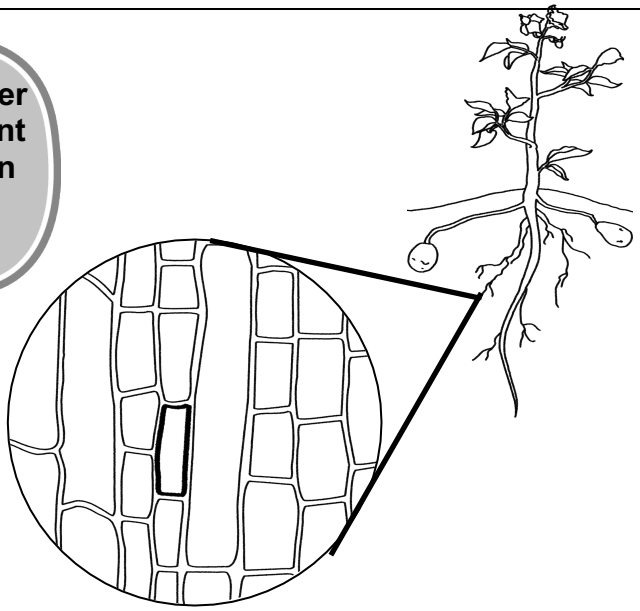
Name: _____ Class: _____ Date: _____

5.3 Explanations Tool: How does a cell in the root of a potato plant use food to grow and divide?

The Matter Movement Question



Draw and label arrows that show molecules moving into and being used into the root cell.

- Show and label molecules with carbon atoms moving into the root cell
- Label the molecules that stay in the root cell

The Matter Change Question

Name the chemical change that potato cells use to build large organic molecules:

What molecules are <u>carbon</u> atoms in before the chemical change?

What molecules are <u>carbon</u> atoms in after the chemical change?

Chemical Change

What <u>other</u> molecules are needed?

What <u>other</u> molecules are produced?

The Energy Question

What forms of energy go into this chemical change?

What forms of energy come out of this chemical change?

Energy Transformation

Explain in words: How does cell in a potato plant use food to grow larger and divide? (*Answer on the back*).

Use this Explanations Tool to help guide your written explanation, being sure to answer the Three Questions

Remember: **Atoms last forever** (so you can arrange atoms into new molecules, but can't add or subtract atoms).
Energy lasts forever (so you can change forms of energy, but energy units can't appear or go away).