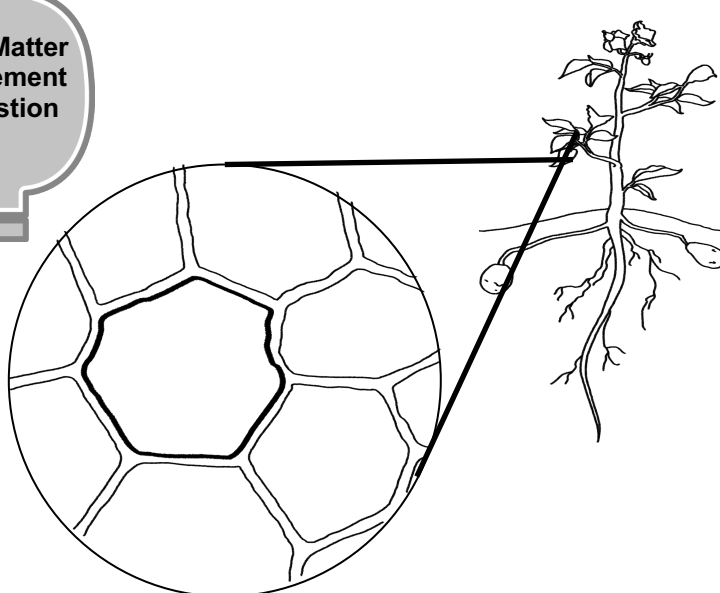


4.4 Explanations Tool: How does a potato plant make the food it needs to grow and function?

**The Matter
Movement
Question**



Draw and label arrows that show molecules moving into, through and out of a **cell** in a potato plant

- Show molecules with carbon atoms moving into and out of the cell in the plant's leaf that makes the food
- Show other relevant molecules

**The Matter
Change
Question**

Name the chemical change that allows cells to make food:
Write the chemical equation for this change:

What molecules are carbon atoms in before the chemical change?

What other molecules are needed?

Chemical Change

What molecules are carbon atoms in after the chemical change?

What other molecules are produced?

**The Energy
Change
Question**


What forms of energy go into this chemical change?

Energy Transformation

What forms of energy come out of this chemical change?

Explain in words: How does a potato plant make the food it needs to grow and function? (Answer on back).
Use this Explanation Tool to help guide your written explanation, be 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).



Plants Unit, Activity 4.4
Carbon: Transformations in Matter and Energy 2019
Michigan State University