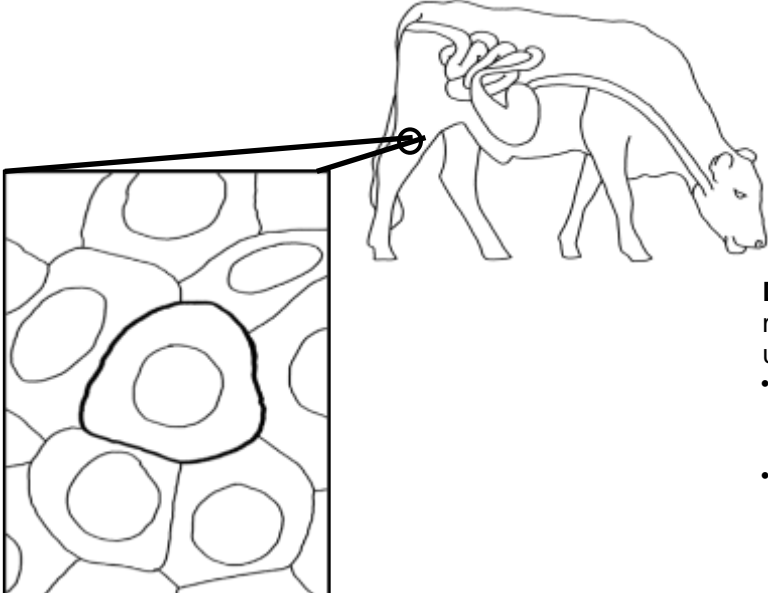


## 5.4 Explanations Tool: How does a skin cell in the leg of a cow use food to grow and divide?

**The Matter  
Movement  
Question**



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

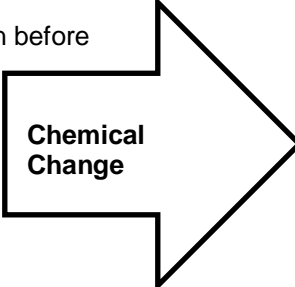
- Show and label molecules with carbon atoms moving into the skin cell in its leg
- Label the molecules that stay in the skin cell

**The Matter  
Change  
Question**

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

What molecules are carbon atoms in before the chemical change?

What other molecules are needed?



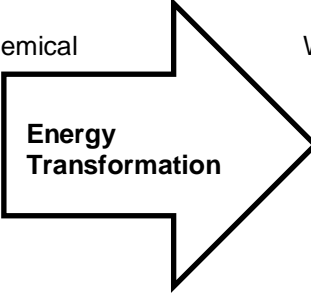
Chemical  
Change

What molecules are carbon atoms in after the chemical change?

What other molecules are produced?

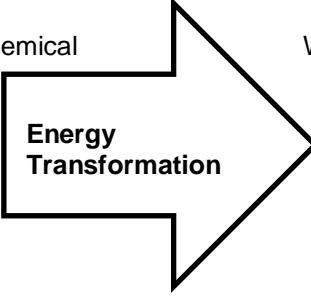
**The Energy  
Question**

What forms of energy go into this chemical change?



Energy  
Transformation

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 skin cell in the leg of a cow use food to grow 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).