

## 5.3 Explanations Tool: How does a cow get small organic molecules to its cells?

**The Matter Movement Question**

**Draw and label** arrows that show how molecules move from the small intestine into the cow's blood

- Show and label molecules with carbon atoms that are in the food that the cow eats.
- Show and label the molecules with carbon atoms that move from the intestine to the blood
- Show and label what happens to the molecules that are not digested.

Note: digestive cells produce molecules (enzymes) that can break large organic molecules up into small organic molecules.

Small Intestine      Blood

**The Matter Change Question**

Name the chemical change that a cow uses to break down food:

What molecules are carbon atoms in before the chemical change?

What other molecules are needed?

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?

What forms of energy come out of this chemical change?

**Explain in words:** How does a cow get small organic molecules to its cells? (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).