

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.

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 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).