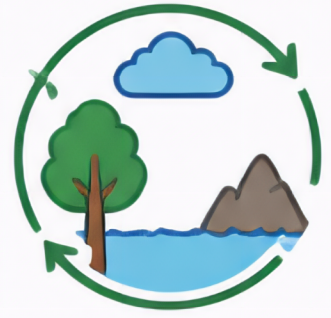




MAKING A MODEL OF THE CARBON CYCLE



In this activity, you will build a simple model to show how carbon moves between living things, the air, water, soil, and rocks.

OBJECTIVE

To create a model that represents the movement of carbon through Earth's systems.

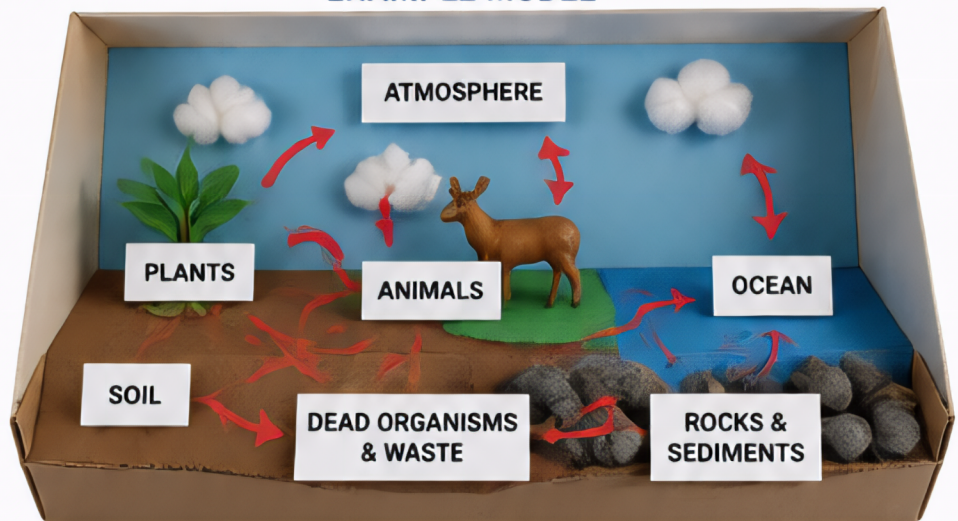
BACKGROUND

Carbon is an element that is part of all living things. It moves (or cycles) between the atmosphere, living organisms, oceans, soil, and rocks. This cycle helps support life on Earth.

YOU WILL NEED

- Shoe box or clear plastic container
- Blue construction paper (water)
- Brown construction paper (soil)
- Green paper or small plant
- Cotton balls (clouds)
- Small rocks (representing rocks)
- Index cards or paper labels
- Markers or colored pencils
- Tape or glue
- (Optional) Arrows cut from paper or drawn arrows

EXAMPLE MODEL



PROCEDURE

1. Line the bottom of the box with brown paper (soil) and blue paper (water).
2. Add rocks to one area to represent rocks and sediments.
3. Add a plant or green paper to represent plants.
4. Add cotton balls to the top of the box to represent the atmosphere (clouds).
5. Place labels for each part of the carbon cycle: Atmosphere, Plants, Animals, Ocean, Soil, Dead Organisms & Waste, Rocks & Sediments.
6. Use arrows to show how carbon moves between the parts. Examples:
 - Plants take in carbon dioxide from the atmosphere.
 - Animals eat plants and take in carbon.
 - Dead organisms break down and return carbon to the soil.
 - Carbon can move from the soil to rocks and sediments over long periods of time.
 - Carbon is exchanged between the ocean and the atmosphere.
7. Check your model and make sure the carbon cycle is shown as a continuous cycle.

KEY TO ARROWS

- Arrow from the atmosphere to plants: carbon dioxide taken in during photosynthesis.
- Arrow from plants to animals: carbon moves when animals eat plants.
- Arrow from dead organisms to soil: carbon returned during decomposition.
- Arrow between ocean and atmosphere: carbon is exchanged.
- Arrow from soil to rocks & sediments: carbon can be stored for a long time.

OBSERVATIONS & QUESTIONS

1. What are some ways carbon moves in your model? _____
2. Why is the carbon cycle important for life on Earth? _____
3. What is one part of the carbon cycle you found most interesting? _____