

# Atmosphere — CO<sub>2</sub> Gas

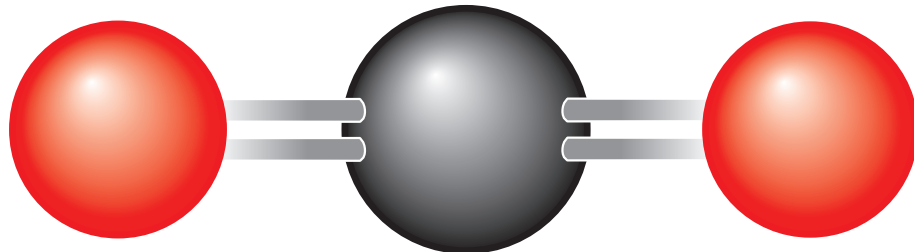
You are a CO<sub>2</sub> molecule in the atmosphere.

You came from

- the hydrosphere by **degassing**, or
- land animals or soil through **respiration**, or
- from the lithosphere through the **combustion** of fossil fuels.

CO<sub>2</sub>

CARBON



OXYGEN

OXYGEN

# Biosphere — Land Plant

You are now part of a glucose molecule in a carrot.

You came as a **carbon dioxide molecule** from the atmosphere by the **photosynthesis** process.



Through photosynthesis, a plant combined carbon, water, and solar energy to create a molecule of glucose.



# Biosphere — Soil

You are now part of an organic molecule in the soil.

You came as part of a **protein molecule** in a plant or animal that died and decomposed.



You became part of an organic molecule in the soil through the process of respiration in soil microbes.

# Biosphere — Land Animal

You are now part of a protein molecule in a rabbit.

You came as a **glucose molecule** from a carrot in the biosphere through the **consumption** process.



**Glucose:**  $C_6H_{12}O_6$

The rabbit ate a carrot and through respiration broke down the glucose molecule, which released energy for her to use to hop around. The glucose molecule broke down into molecules of carbon dioxide and water and the carbon eventually became part of a protein molecule.



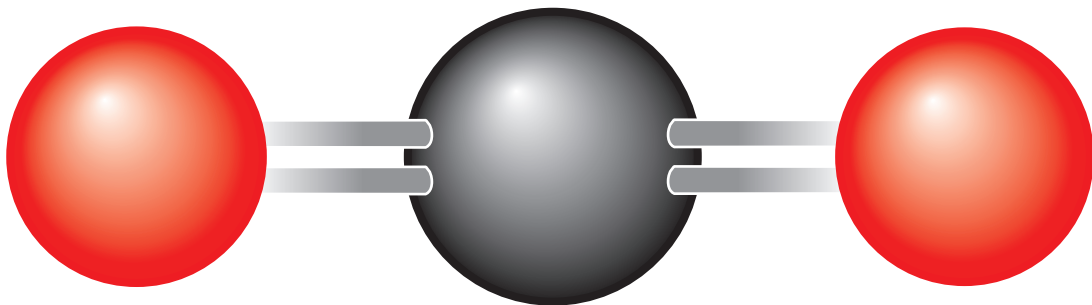
# Hydrosphere — Ocean

You are part of a dissolved CO<sub>2</sub> molecule in the ocean.

You came as part of a **carbon dioxide molecule** from the atmosphere by the **dissolution** process or from a marine animal through **respiration**.



CO<sub>2</sub>



# Hydrosphere — Marine Plant

You are now part of a glucose molecule in seaweed.

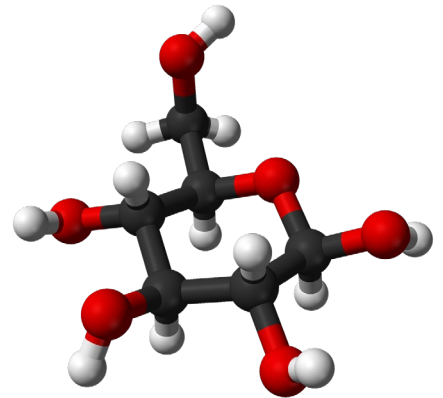
You came as part of a **carbon dioxide molecule** from the hydrosphere-ocean through the **photosynthesis** process.



Through photosynthesis, a plant used water and energy from the sun to create a molecule of glucose.



## Glucose



# Hydrosphere — Marine Animal

You are now part of a protein molecule in a sea turtle.

You came as part of a **glucose molecule** from seaweed in the hydrosphere through the **consumption** process.



The turtle ate seaweed and through digestion and respiration, broke down the glucose molecule, which released energy for her to use to swim around. The glucose molecule broke down into molecules of carbon dioxide and water and the carbon eventually became part of a protein molecule.



# Lithosphere — Fossil Fuel

You are now part of a hydrocarbon molecule in fossil fuels.

You are part of a **hydrocarbon molecule** in the lithosphere. You are a part of all fossil fuels. Fossil fuels took millions of years to form.



Fossil fuels are made up of hydrocarbon molecules, which are made up of carbon, hydrogen, and oxygen atoms. Fossil fuels include coal, petroleum, and natural gas. Until people discovered how to burn fossil fuels to create energy and for other uses, the hydrocarbons stayed underground for millions of years.