

# The Carbon Cycle

Carbon (C) is the basis of life on Earth. Scientists consider 99.9% of all organisms on the planet to be carbon based life. Those organisms need carbon to survive. Whether the carbon is in the form of a sugar or carbon dioxide gas, we all need it. The Earth only has a fixed amount of carbon. The carbon cycle is the ultimate form of **recycling**.



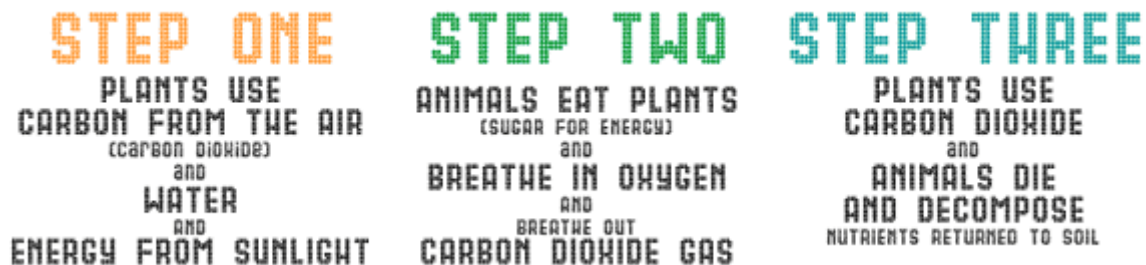
PLANTS PULL CARBON FROM  
THE AIR AND ANIMALS  
EAT THE PLANTS.

## Start With Plants

Plants are a good starting point when looking at the carbon cycle on Earth. Plants have a process called **photosynthesis** that enables them to take carbon dioxide out of the atmosphere and combine it with water. Using the energy of the Sun, plants make sugars and oxygen molecules. All of the non-photosynthetic creatures on the planet use the oxygen. Every creature on the planet uses the sugars and starches created by plants.

## Then Animals Eat the Plants

Animals are the non-photosynthetic creatures of the planet. They are not able to create their own food. Instead, they eat plants or other animals. The sugars and starches they eat are broken down by a process of metabolism. The results are energy for the creature, water, and carbon dioxide molecules. The carbon dioxide then returns to the atmosphere where the plants use it again.



## Who Eats The Animals?

There are also **decomposers** involved in the carbon cycle. They break down organic material such as dead animals, poop, or leaves. Decomposers are able to break down the chemical compounds inside the body. They also release carbon dioxide as well as **methane**.

Sometimes the decomposers don't break down organic material. There are great oil fields under the surface that are made of plants that did not decompose millions of years ago. There are also layers of rock made of millions of creatures who had shells. One day this carbon will return to the everyday carbon cycle, but geological processes are much slower than living processes.

**Label the diagram with the parts of the carbon cycle:**

Auto and factory emissions

Plant respiration

Animal respiration

Organic decay

Ocean exchange

Dead organisms and waste products

Fossils and fossil fuels

Mineral deposits

Photosynthesis

