

# FACTSHEET 2: The carbon cycle



Almost all of the Earth's carbon is locked away as **sedimentary rocks**. But carbon is also in us, and all around us. It is stored in:

- living things (plants and animals)
- the **atmosphere**
- lakes and oceans.

Many natural processes use this carbon.

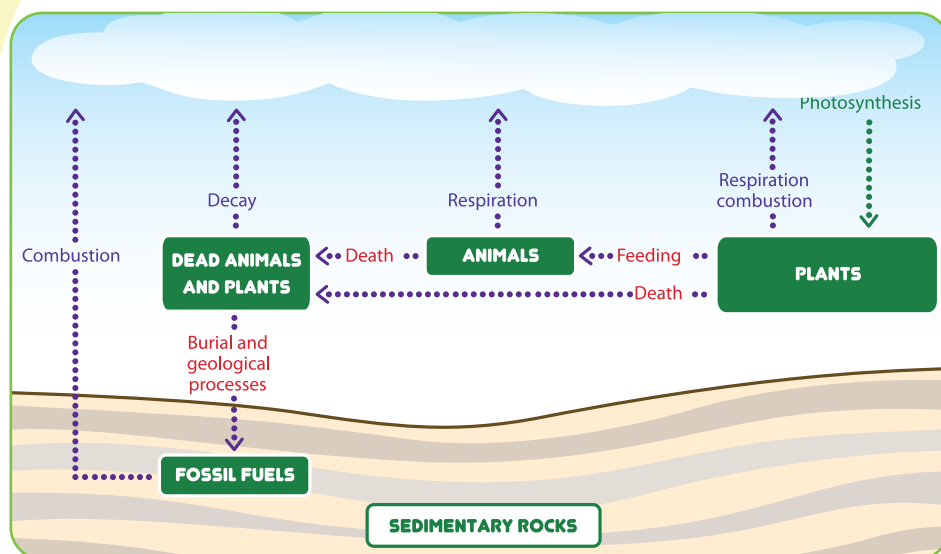
- Plants take **carbon dioxide** from the atmosphere
- Some animals eat plants
- Others eat these animals
- All animals return carbon dioxide to the atmosphere as they respire

Each process takes carbon from one store, and adds it to another. This **carbon cycle** moves carbon between the different stores in our environment.

The size of each store, or **carbon sink**, has changed slowly over time. Millions of years ago the atmosphere was rich in carbon. As life evolved, tiny plants removed much of this carbon from the atmosphere. This change was very slow. The size of each carbon store has also changed slowly.

But our energy use has introduced a new process into the carbon cycle. Sedimentary rocks also contain **fossil fuels**. These are the oil, coal and gas that formed from the remains of plants and animals that lived millions of years ago.

When we burn fossil fuels for energy, the carbon that they store is released into the atmosphere as carbon dioxide. This process has altered the balance of the carbon cycle, and the atmosphere now stores more carbon than before.



The carbon cycle

## Think about it

- You are about 18% carbon. This has come from the plants and animals that you eat. Originally, every carbon atom came from the atmosphere. At some point, each one will return there.

## Related factsheets

- 1 What is a climate?
- 3 Carbon and energy
- 4 The greenhouse effect and climate change
- 5 Carbon emissions and carbon footprints

