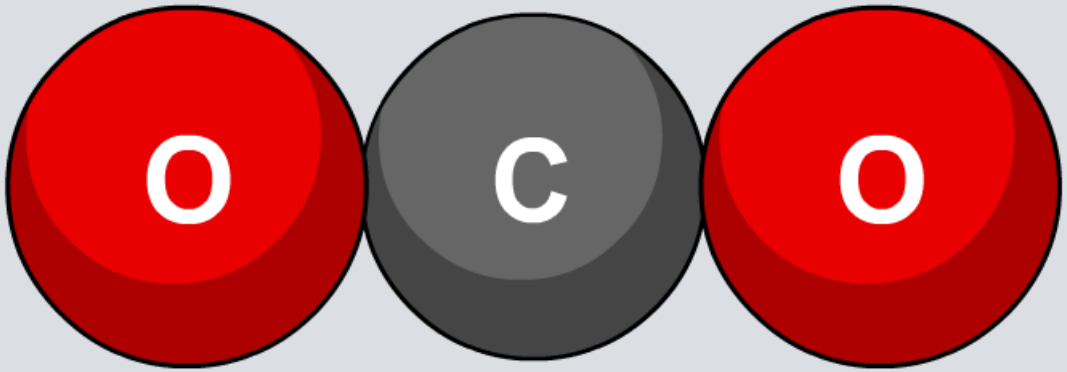
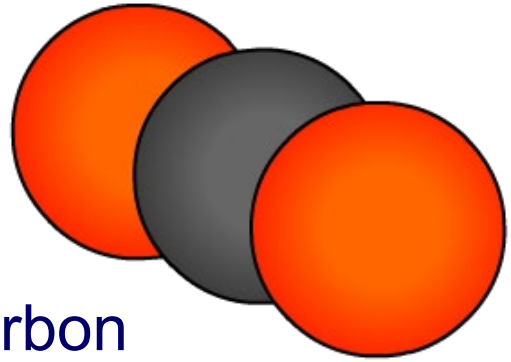
Carbon Cycle



Why is carbon important?

Proteins, fats and sugar all contain **carbon**. Life without carbon would be very different and might be impossible.

Carbon is present in the atmosphere as **carbon dioxide**.

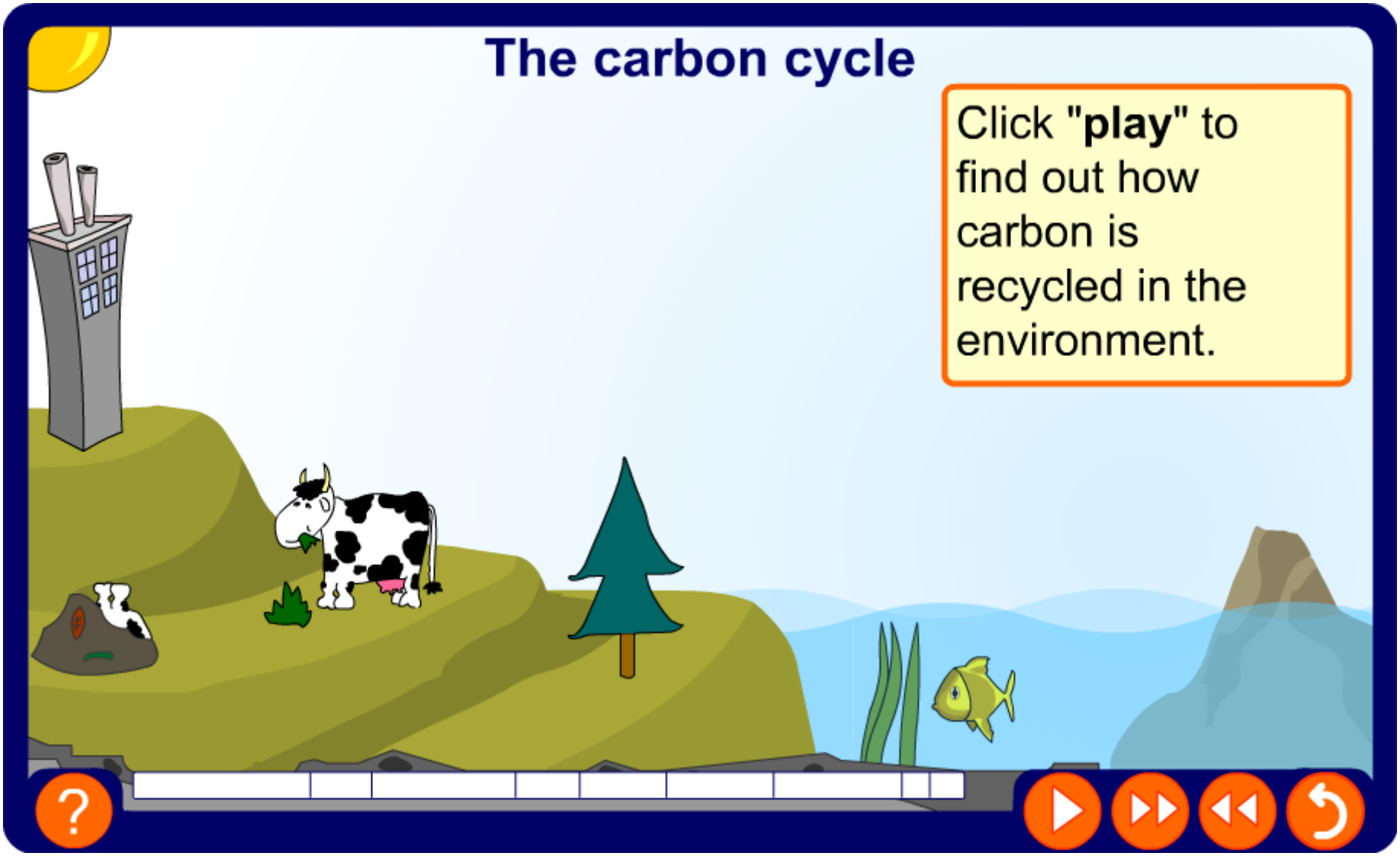


Plants use carbon dioxide during photosynthesis to produce sugars. The carbon is then transferred to animals along food chains.

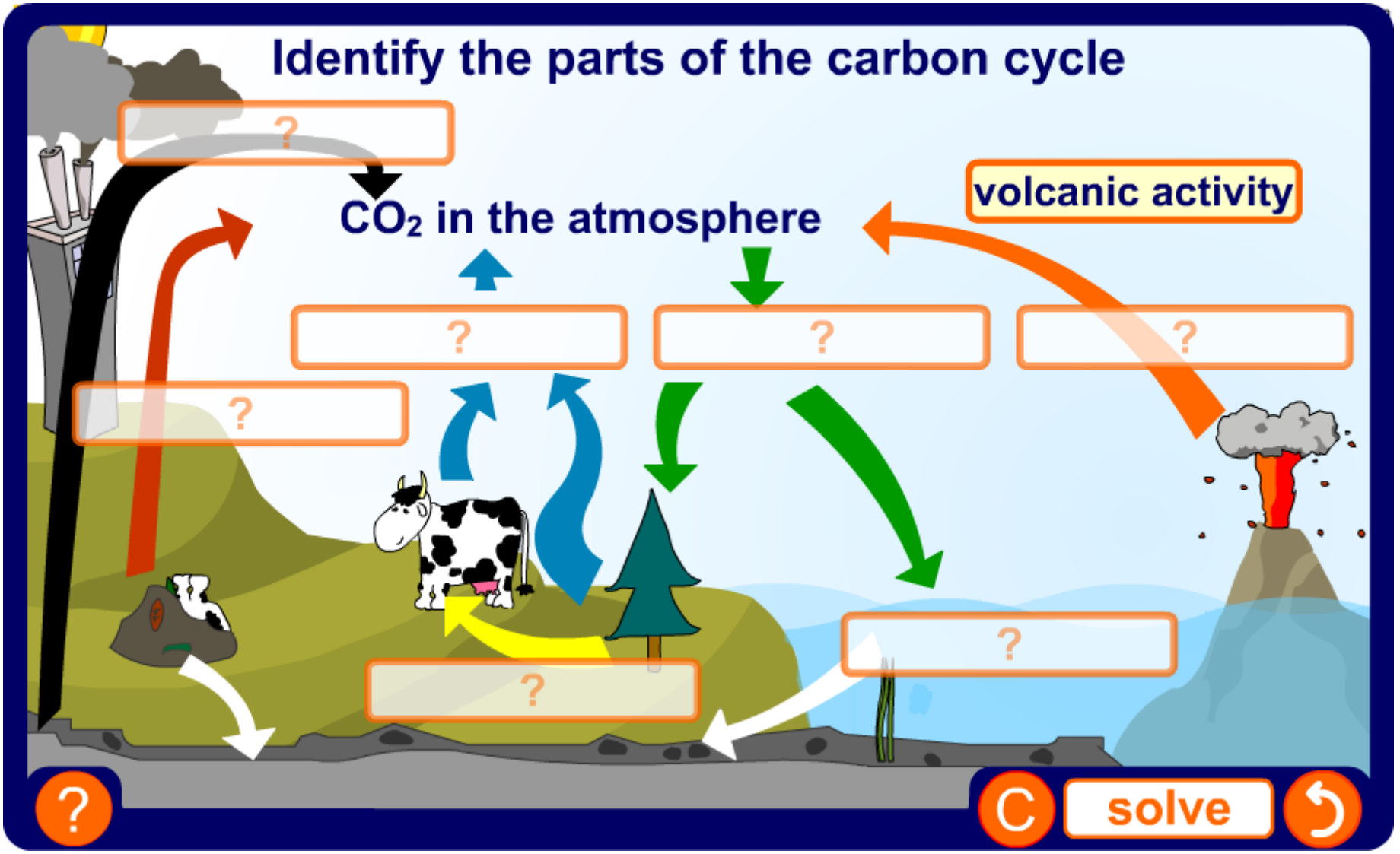
What happens to the carbon in organisms when they die?

- As dead matter decomposes, carbon is released back into the atmosphere in the form of carbon dioxide.
- The carbon from dead organisms can also form fossil fuels and sedimentary rocks such as limestone. These are **long-term carbon stores**.

What is the carbon cycle?



Labeling the carbon cycle

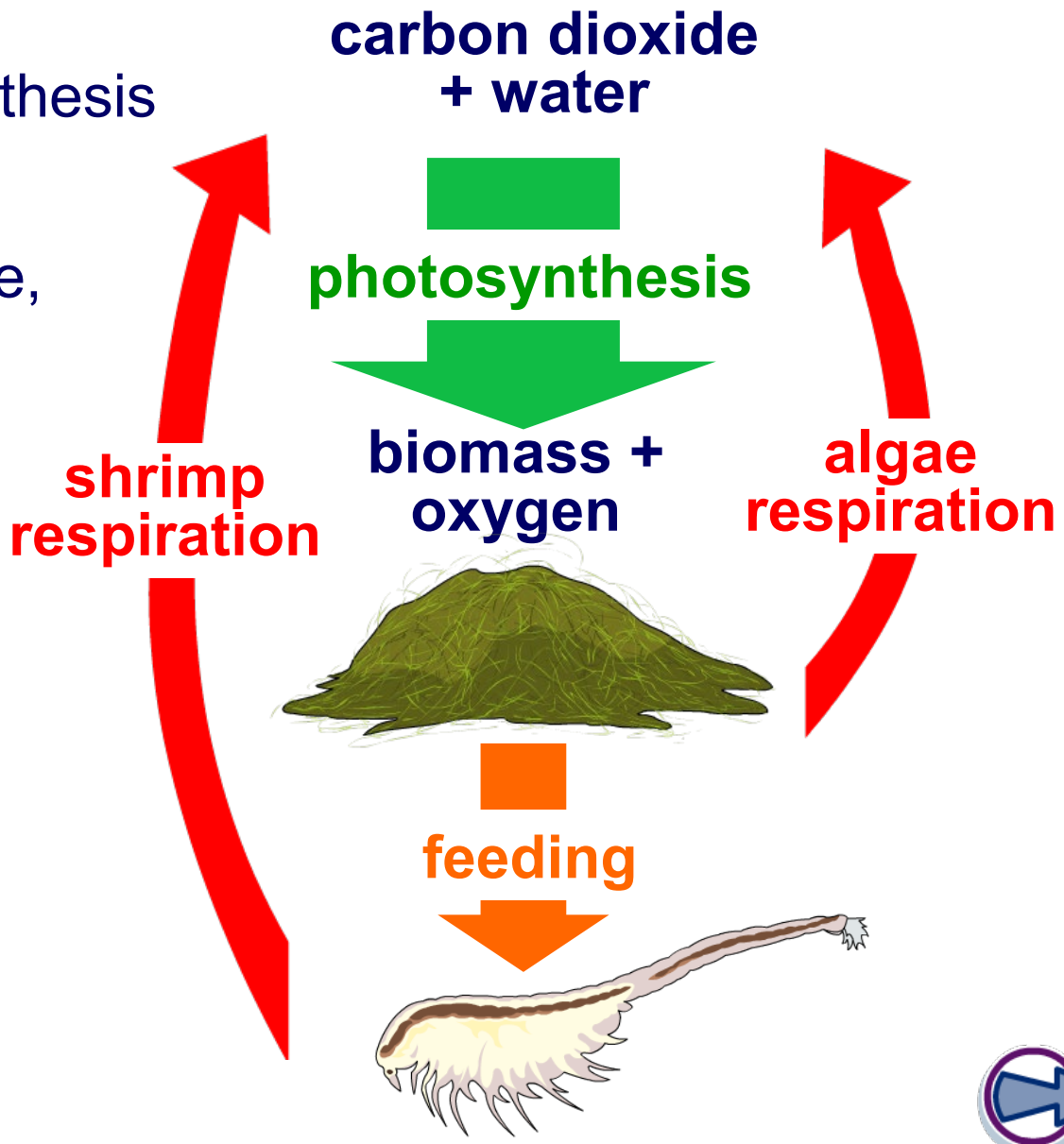


How is carbon recycled?

Carbon is constantly recycled by photosynthesis and respiration.

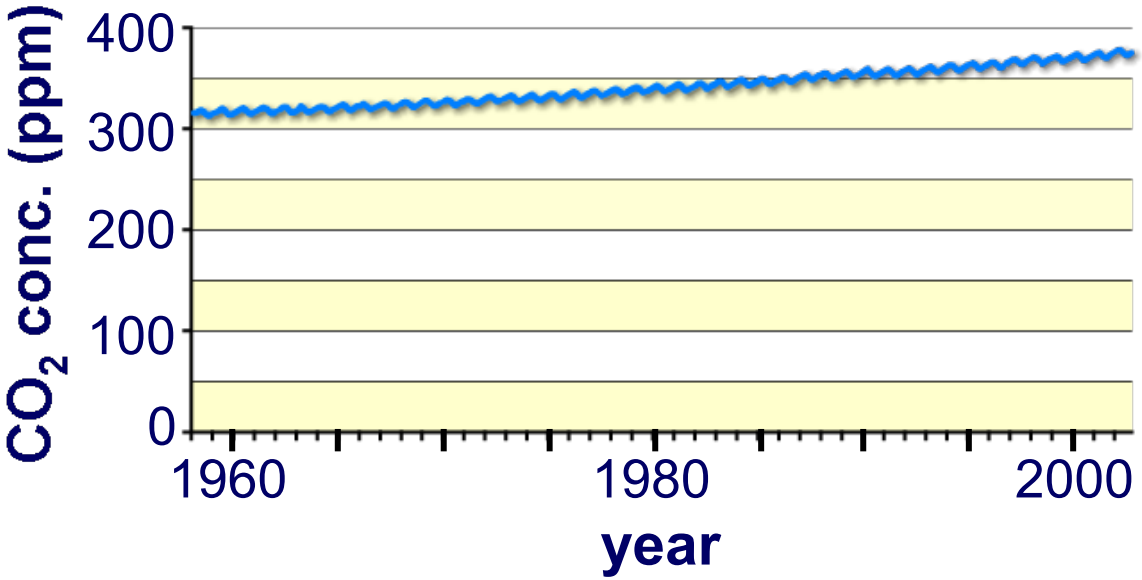
In a sealed ecosphere, carbon dioxide concentrations fluctuate, but the mean level does not change.

How are carbon dioxide levels changing in the atmosphere of the Earth?



Are carbon dioxide levels rising?

Although the total amount of carbon in the environment is fixed, carbon dioxide levels are constantly fluctuating.



Currently, the general trend shows an increasing level of carbon dioxide. Why might this be happening?

Many scientists believe that human activities, such as burning fossil fuels and making cement from limestone, are responsible for increasing carbon dioxide levels. What environmental problems might this cause?

Carbon: true or false?