

Worksheet 2.7.2 Understanding how carbon is recycled

1 Describing the carbon cycle



Work with a partner to complete this task.

Look at the statements below about processes in the carbon cycle.

a) Which of the processes listed below are ways that carbon dioxide leaves the atmosphere?

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b) Which of the processes listed below are ways that carbon dioxide enters the atmosphere?

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- A Respiration in plants
- B Photosynthesis by land plants
- C Volcanic eruptions
- D Photosynthesis by phytoplankton in the oceans
- E Diffusion of carbon dioxide into the oceans
- F Forest fires
- G Fossilisation of plants and animals
- H Respiration in animals
- I Burning fossil fuels
- J Decomposers feeding on dead plants and animals
- K Weathering of limestone rock
- L Formation of limestone rock

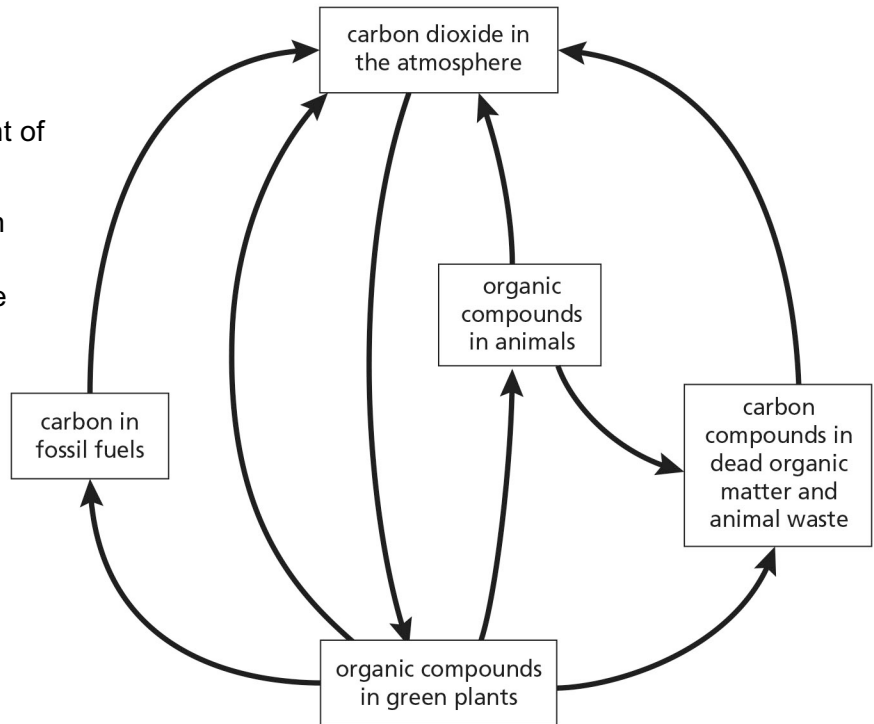
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2 Explaining the carbon cycle



Work on your own for this task.

- a) Explain how each stage in the carbon cycle affects the amount of carbon in the atmosphere.
- b) Use the carbon cycle to explain why for thousands of years the amount of carbon dioxide in the Earth's atmosphere was approximately constant.



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3 Carbon footprint



For this task you will work with a partner.

- a) Explain why the amount of carbon dioxide in the atmosphere has been steadily rising for the past 200 years.

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- b) Discuss and compare the carbon footprints of these children, then suggest how they could reduce their footprints:

Rani lives in India in the countryside. Her house has one electric light in the main room. Her parents burn wood for heating and cooking. Rani travels 2 miles to school but has to walk there and back. The family has no TV or computer. Rani collects water from a communal tap every day before school to wash and drink. She has never been on a holiday.

Timur lives in an apartment block in Belarus. His house has one electric light in every room. He uses his light for about 1 hour a day in the winter. His family has a gas cooker. Timur travels 1 mile to school on his bike each day. The family has no computer, but does have a TV, which Timur usually watches from 5 pm until 9 pm. Timur has running water in his apartment and he has a bath once a week. He has never been on a holiday.

Ben lives in a house in Manchester. His bedroom has a light fitting with five light bulbs. His light is on for 6.5 hours per day in the winter. He has a TV and a computer in his room, which he normally uses every night from 4 pm until 9 pm, with a break for an hour for his tea and a shower. His mum drives him 1 mile to and from school every day. He goes on holiday by plane to Europe twice a year.

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