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Geography review

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Activity

Quiz: Carbon sinks and stores

This quiz is marked out of 10. It could be used as a quick review before teaching the topic to see what students already know. Alternatively, it could be a short team quiz, used for fun but as a way of opening up a discussion of these issues. Answers are available to download as a separate document from GeographyReview*Extras*.

1 Which of Earth's spheres stores the most carbon? (1 mark)

A Hydrosphere O

B Lithosphere O

C Atmosphere O

D Biosphere O

2 Which of the world's forest biomes store the most carbon? (1 mark)

A Boreal/taiga forest O

B Temperate (deciduous) forest O

C Mediterranean forest O

D Tropical rainforest O

3 Which of these rocks types is a major part of carbon storage in the lithosphere? (1 mark)

A Granite O

B Limestone O

C Sandstone O

D Slate O

4 Humans extract oil from geological stores underground and burn it e.g. as petrol and diesel. How old is the oil we are burning? (1 mark)

A 5–10 million years old O

B 10,000–50,000 years old O

C 50–250 million years old O

D 500,000–800,000 years old O

5 Humans have increased the size of the atmospheric carbon store since the pre-industrial era by emitted CO_2. By what percentage has atmospheric CO_2 increased since 1870?

(1 mark)

A	10%	O
B	25%	O
C	50%	O
D	100%	O

6 Which of Earth's carbon stores is 1500 gigatonnes in size, about twice the size of the atmospheric carbon store? (1 mark)

A	Surface layers of the ocean	O
B	Permafrost	O
C	Natural gas	O
D	Marine biomass	O

7 Which greenhouse gas is shown in the image below? (1 mark)

A	Carbon dioxide	O
B	Water vapour	O
C	Hydrogen carbonate	O
D	Methane	O

8 How many trees are needed to sequester 1 tonne of atmospheric carbon per year? (1 mark)

A 3 O

B 130 O

C 30 O

D 300 O

9 In which carbon store is the 'biological pump' found? (1 mark)

A In the oceans O

B In forests O

C In the atmosphere O

D In sediments O

10 The size of carbon stores is usually measured in gigatonnes (Gt). What is 1 gigatonne equivalent to? (1 mark)

A 10 billion tonnes O

B 1 trillion kilograms O

C 100 million tonnes O