Chemistry of the atmosphere

Chemistry Paper 2 | 30 quick questions

GCSE science knowledge recall

Answer online, marked instantly

Name: _____ **Date:** _____ **Score:** _____ **/ 30**

1 Which gas makes up about four-fifths (about 80%) of the air today?

2 Roughly what percentage of the air today is oxygen? Give a whole number.

3 Which gas makes up about 0.04% of the air today and is linked to climate change?

4 Name the group of very unreactive gases, such as argon, that make up a small part of the air.

5 Scientists think the gases of the early atmosphere were released mainly by what kind of activity?

6 Which gas do scientists think made up most of the Earth's early atmosphere?

7 As the early Earth cooled, water vapour in the atmosphere condensed. What did this form?

8 Apart from carbon dioxide, water vapour and nitrogen, name one of the two gases that the early atmosphere may have contained in small amounts.

9 Was there much oxygen in the Earth's early atmosphere? Answer yes or no.

10 Which process carried out by algae and plants added oxygen to the atmosphere?

11 Algae first started producing oxygen roughly how many billion years ago?

12 Carbon dioxide dissolved in the oceans and reacted to form solid compounds that settled as sediment. Name the type of compound.

13 Name the sedimentary rock, made mainly of calcium carbonate from shells and skeletons, that locked away carbon dioxide.

14 Name one fossil fuel formed from ancient plants and animals that also locked away carbon.

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15 Give two ways the amount of carbon dioxide in the early atmosphere was reduced.

16 Name the greenhouse gas released by cattle and from rice fields and landfill sites.

17 Carbon dioxide and methane are greenhouse gases. Name the third main greenhouse gas, made of hydrogen and oxygen.

18 Greenhouse gases let short-wavelength radiation from the Sun pass through. Which type of radiation do they absorb as it leaves the Earth's surface?

19 Describe how greenhouse gases keep the Earth warm.

20 Burning fossil fuels and deforestation both make the amount of carbon dioxide in the air do what?

21 As the Earth warms, polar ice melts. What happens to sea levels as a result? Answer in one word.

22 Explain why it is hard for scientists to predict exactly how the climate will change.

23 What is the name for the total amount of carbon dioxide and other greenhouse gases given out over the full life cycle of a product, service or event? Answer with two words.

24 Name the process that captures carbon dioxide from a power station and stores it underground. Answer with three words.

25 When a fuel burns with too little oxygen, a toxic gas forms that has no colour and no smell. Name it.

26 What is the name for burning a fuel in a limited supply of oxygen?

27 Which gas forms when fuels containing sulfur impurities are burned?

28 Sulfur dioxide and oxides of nitrogen both cause which kind of environmental problem? Answer with two words.

29 Oxides of nitrogen form inside car engines when nitrogen reacts with which gas from the air?

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30 Tiny solid particles of carbon (soot) in the air reduce the sunlight reaching the ground. What is this effect called? Answer with two words.

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