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SPECA

GCSE Combined Science (AQA Trilogy) · Chemistry

Chemistry of the Atmosphere · Worksheet

Today's atmosphere and how it formed

1) State the approximate percentage of nitrogen and the approximate percentage of oxygen in today's atmosphere. **[2]**

2) Name two gases, other than nitrogen and oxygen, present in small proportions in today's atmosphere. **[2]**

3) Describe the leading theory of the gases present in the Earth's early atmosphere, and their likely source. **[3]**

4) Explain how the amount of carbon dioxide in the early atmosphere decreased over time. **[2]**

5) Explain how the amount of oxygen in the atmosphere increased over geological time. **[2]**

The greenhouse effect and climate change

6) Name three greenhouse gases. **[3]**

7) Describe the greenhouse effect, referring to short-wavelength and longer-wavelength radiation. **[3]**

8) Give two human activities that increase the amount of carbon dioxide in the atmosphere. **[2]**

9) Give two human activities that increase the amount of methane in the atmosphere. **[2]**

10) Describe one potential effect of global climate change. **[1]**

11) Define a carbon footprint. **[2]**

12) Give one reason why actions to reduce carbon footprint can be limited in practice. **[1]**

Atmospheric pollutants

13) A fuel contains carbon, hydrogen, and a small amount of sulfur. Name three pollutants that could be released when this fuel is burned. **[3]**

14) Explain why carbon monoxide is particularly dangerous. **[2]**

15) Explain how sulfur dioxide and nitrogen oxides contribute to acid rain, and describe one problem this causes. **[2]**

16) Explain how particulates (soot/unburned hydrocarbons) cause global dimming. **[2]**

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