

Air, pollution and clean water resources

Chemistry grades 9-10 (GCSE · IGCSE · O Level · Class 9-10) · Test

Name: _____ Date: _____ Class: _____ Mark: ____ / 20

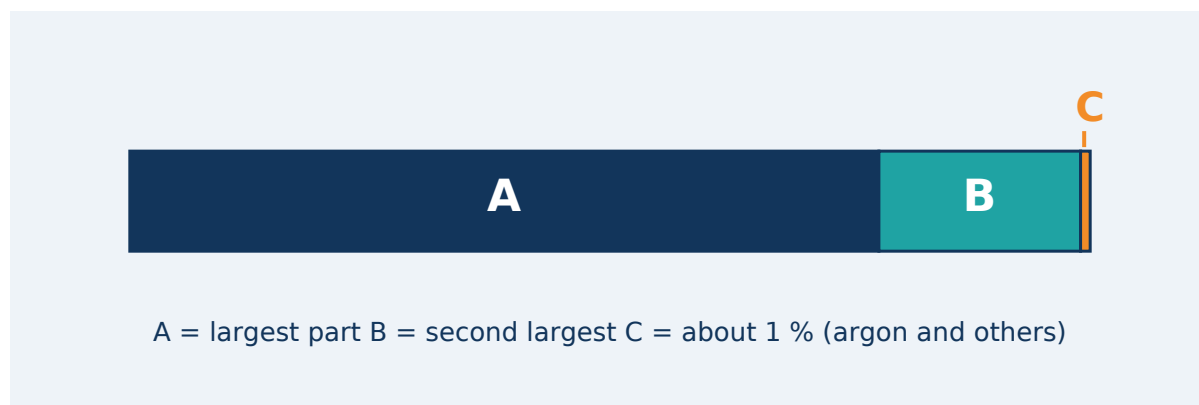
This test covers the composition of the atmosphere, greenhouse gases, pollutants from fuels, drinking water and life cycle assessments. Answer every question. Show the working for the calculation, and give complete explanations for the questions worth more than one mark.

Level: Chemistry grades 9-10 (GCSE · IGCSE · O Level · Class 9-10) · **Curriculum:** HS-ESS3-6, GCSE C9-C10

Time: 40 minutes · 8 questions · Total: 20 marks · Calculator allowed

Question 1 Gases in air (3 marks)

The bar shows the composition of dry air.



Composition of dry air: gases A, B and C.

- Name gas A. (1 mark)
- Name gas B and give its percentage. (1 mark)
- Name the most abundant gas in section C. (1 mark)

Question 2 Greenhouse effect (3 marks)

- Name two greenhouse gases. (1 mark)
- Explain how greenhouse gases keep the Earth warm. (2 marks)

Question 3 Carbon monoxide (2 marks)

Explain how carbon monoxide forms in an engine and why it is harmful.

Question 4 Acid rain (3 marks)

- Name the pollutant gas from sulfur impurities in fuel. (1 mark)
- State one problem it causes. (1 mark)
- State one way to reduce it. (1 mark)

Question 5 Potable water (2 marks)

Explain the difference between potable water and pure water.

Question 6 Water treatment (3 marks)

Describe the steps used to make drinking water from a reservoir, and say why chlorine is added.

Question 7 Volume calculation (2 marks)

Air contains 0.04 % carbon dioxide by volume. Calculate the volume of carbon dioxide in 250 dm³ of air.

Question 8 Life cycle stages (2 marks)

Name the four stages of a life cycle assessment.