

C6.3.2 Pollution and the atmosphere (C6.2.2 for combined science)

Previous knowledge

- Combustion is when a substance burns in oxygen
- *Complete combustion is when there is an excess of oxygen*
 - *Complete combustion of carbon gives **carbon dioxide***
- *Incomplete combustion is when there is a limited supply of oxygen*
 - *Incomplete combustion of carbon gives **carbon monoxide***

Chemistry
only,
ignore if
you are
doing
combined
science

Answer the quiz questions

Why the difference?



The lockdown for the coronavirus caused a massive reduction in air pollution



← smog

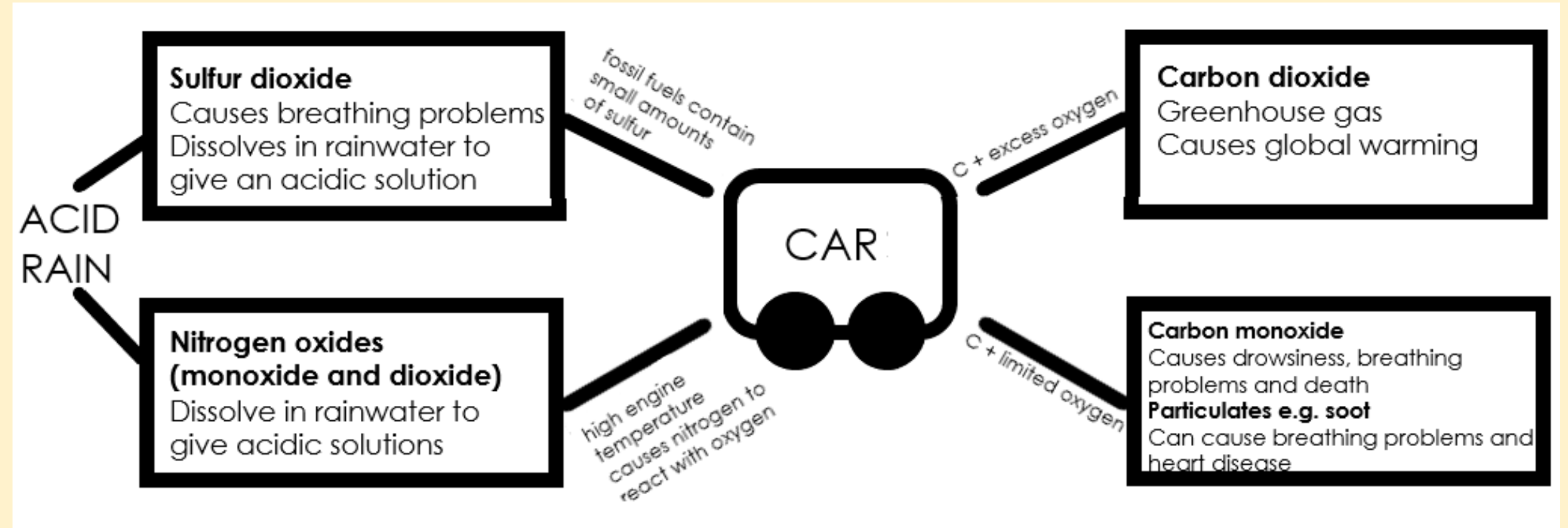
Learning objectives

- State the major pollutants in the atmosphere
- Describe the problems that the major pollutants cause

Key definition

A **pollutant** is a substance that is released into the environment that may cause harm to living things

Major pollutants



Extension:

Write word and symbol equations for the formation of these pollutants
Research the ways that these pollutants could be reduced

TASK 1: Link the atmospheric pollutants to their effects

Particulates

Causes drowsiness, breathing problems and death

CO

Causes acid rain that erodes stone and kills trees and living things

SO₂

Causes breathing problems and heart disease

CO₂

Causes acid rain and breathing problems

NO and NO₂

Greenhouse gas that traps heat contributing to the global rise in the temperature of the earth

TASK 2: Answer the exam questions

Which product is formed when there is incomplete combustion of propane?

- 1 **A** sulfur dioxide
B oxygen
C hydrogen
D carbon monoxide

2 Carbon monoxide and oxides of nitrogen are pollutants found in air.

Explain why it is important that atmospheric pollution is controlled.

[2]

TASK 2: Answer the exam questions

Which product is formed when there is incomplete combustion of propane?

- 1
- A sulfur dioxide
 - B oxygen
 - C hydrogen
 - D carbon monoxide**

2 Carbon monoxide and oxides of nitrogen are pollutants found in air.

Explain why it is important that atmospheric pollution is controlled.

Any two from:

Maintain air quality

Reduce or prevent harm to living organisms

Control or reduce smog

Protect buildings and/or metals

[2]

Answer the quiz questions