

Exercise walk-through

7.4

Atmospheric CO₂ and Particulates

AP Environmental Science

CO₂, particulates, and indoor air

Combustion releases **carbon dioxide** plus **particulate matter**.

Indoors can be worse: **radon**, **carbon monoxide**, **asbestos**. Fix: **ventilation**.



Indoor air: cookstoves and poor ventilation

Exercises 2.1-2.3

2.1 Why is rising CO₂ a concern?

[1]

2.2 What is particulate matter?

[1]

2.3 Which is mainly a health problem: CO₂ or PM?

[1]

Exercises 2.1-2.3

2.1 Why is rising CO₂ a concern?

[1]

2.1

- It is a greenhouse gas that traps heat and drives climate change
-

2.2 What is particulate matter?

[1]

2.2

- Tiny solid or liquid particles (soot, dust) in the air
-

2.3 Which is mainly a health problem: CO₂ or PM?

[1]

2.3

- PM

Exercise 3.1

3.1 The most dangerous particulate matter for health is

[1]

☐

A large dust only

B fine PM_{2.5} that lodges deep in the lungs

C carbon dioxide

D oxygen

Exercise 3.1

3.1 The most dangerous particulate matter for health is

[1]

☐

A large dust only

B fine PM_{2.5} that lodges deep in the lungs

C carbon dioxide

D oxygen

3.1 B

- fine PM_{2.5} that lodges deep in the lungs

Exercise 3.2 (a)

3.2 A city has high levels of both CO₂ and PM_{2.5}.

(a) State the main impact of each.

[2]

Exercise 3.2 (a)

3.2 A city has high levels of both CO₂ and PM2.5.

(a) State the main impact of each.

[2]

(a)

- CO₂
- climate change; PM2.5
- respiratory/heart disease

Exercise 3.2 (b)

3.2 A city has high levels of both CO₂ and PM_{2.5}.

(b) Explain why PM_{2.5} is especially harmful to health.

[2]

Exercise 3.2 (b)

3.2 A city has high levels of both CO₂ and PM_{2.5}.

(b) Explain why PM_{2.5} is especially harmful to health.

[2]

(b)

- It is fine enough to lodge deep in the lungs and enter the bloodstream, causing serious respiratory and heart problems

Exercise 3.3

3.3 Explain why CO₂ is described as a global problem while PM is more local. [2]

Exercise 3.3

3.3 Explain why CO₂ is described as a global problem while PM is more local. [2]

3.3

- CO₂ mixes throughout the atmosphere and warms the whole planet (global), while PM settles out near its source, so its worst effects are on local air quality