

Exercise walk-through

Fuel Types and Uses ■ 6.3

eXercise

You must be able to

- match fuels (coal, oil, natural gas) to their main uses
- compare their energy content and pollution
- explain **fuelwood** use in developing regions

Method — Main fuels and uses

- **Coal** — mainly for **electricity** generation; high CO₂ and pollution.
- **Oil (petroleum)** — mainly **transportation** (gasoline, diesel).
- **Natural gas** — heating and electricity; **cleanest** fossil fuel (least CO₂ per energy).

Method — Pollution ranking

For the same energy, **coal** pollutes most (most CO₂, sulfur), then oil, then **natural gas** (least). This is why gas is often a “bridge” fuel.

Method — Fuelwood

In many **developing** regions, **fuelwood** and charcoal are the main energy source for cooking/heating, which can drive deforestation and indoor air pollution.

Method — A worked match

A power plant burning coal produces electricity; a car burns gasoline (from oil) — different fuels for different main uses.

Practice 2.1 ■ 1 mark

Which fossil fuel is mainly used for transportation?

Solution 2.1

Method: Main fuels and uses

Worked steps

Oil (petroleum) **B1**.

Practice 2.2 ■ 1 mark

Which fossil fuel is the cleanest-burning?

Solution 2.2

Method: Main fuels and uses

Worked steps

Natural gas **B1**.

Practice 2.3 ■ 1 mark

What is the main energy source in many developing regions?

Solution 2.3

Method: Fuelwood

Worked steps

Fuelwood (or charcoal/biomass) **B1**.

Exam-style 3.1 ■ 1 mark

Coal is used mainly for

- A** transportation
- B** electricity generation
- C** cooking oil
- D** plastics only

Solution 3.1

Method: Main fuels and uses

A transportation

B electricity generation 

C cooking oil

D plastics only

Worked steps

B — electricity generation.

Exam-style 3.2 ■ 2 marks

Three power options: coal, natural gas, and oil.

- (a) Rank them from most to least CO₂ per unit energy.
- (b) State the main use of each.

Solution 3.2

Worked steps

(a) Coal > oil > natural gas **M1** **A1**. (b) Coal → electricity; oil → transportation; natural gas → heating/electricity **B1** **B1** **B1**.

Exam-style 3.3 ■ 2 marks

Explain why heavy fuelwood use can harm the environment in developing regions.

Solution 3.3

Method: Fuelwood

Worked steps

Collecting fuelwood faster than it regrows causes deforestation (erosion, habitat loss), and burning it indoors causes indoor air pollution and health problems **M1** **A1**.