

Exercise walk-through

Terrestrial Biomes ■ 1.2

eXercise

You must be able to

- explain that **biomes** 生物群系 are determined mainly by **temperature and precipitation** 温度和降水
- match a biome to its climate
- name key terrestrial biomes

Method — What sets a biome

A **biome** is a large region with a characteristic climate and community. **Terrestrial biomes** are determined mainly by **temperature** and **precipitation**.

Method — The main terrestrial biomes

- **Desert** — very low precipitation.
- **Tropical rainforest** — hot and very wet.
- **Grassland** — moderate rainfall, seasonal.
- **Temperate forest** — moderate temperature and rainfall.
- **Taiga (boreal forest)** — cold, coniferous.
- **Tundra** — very cold, low precipitation, frozen soil (permafrost).

Method — Reading a climate

Given a climate (e.g. hot, very wet), identify the biome (tropical rainforest). Given the biome, describe its climate.

Method — A worked match

A region with high temperature and high rainfall all year → **tropical rainforest**, with high biodiversity.

Practice 2.1 ■ 2 marks

What two climate factors mainly determine a terrestrial biome?

Solution 2.1

Method: What sets a biome

Worked steps

Temperature and precipitation **B1** **B1**.

Practice 2.2 ■ 1 mark

Which biome has very low precipitation?

Solution 2.2

Worked steps

Desert **B1**.

Practice 2.3 ■ 1 mark

Which biome has frozen soil (permafrost)?

Solution 2.3

Method: The main terrestrial biomes

Worked steps

Tundra **B1**.

Exam-style 3.1 ■ 1 mark

Terrestrial biomes are determined mainly by temperature and

A soil color

B precipitation

C altitude only

D wind speed

Solution 3.1

Method: What sets a biome

- A soil color
- B precipitation
- C altitude only
- D wind speed



Worked steps

B — precipitation.

Exam-style 3.2 ■ 1 mark

A region is hot with heavy rainfall year-round.

- (a) Name the biome.
- (b) State one feature you would expect there.

Solution 3.2

Method: A worked match

Worked steps

(a) Tropical rainforest **B1**. (b) Any one: high biodiversity, tall dense trees, high productivity **B1**.

Exam-style 3.3 ■ 2 marks

Explain why deserts and tropical rainforests differ so greatly despite both being warm.

Solution 3.3

Worked steps

They differ mainly in **precipitation** — a desert is very dry while a rainforest is very wet — which controls the plants and animals that can live there **M1** **A1**.