

4 Weather and climate – Part 2

Name: _____ Class: _____ Date: _____

Vocabulary 词汇

Write each word three times. 把每个单词抄写三遍。

English	中文	Write it 3 times (English)
global wind patterns	全球风带	_____
Coriolis effect	科里奥利效应	_____
watershed	流域	_____
rain shadow	雨影	_____
El Niño	厄尔尼诺	_____
La Niña	拉尼娜	_____

Recall

You already notice weather and seasons:

- The Sun heats the equator more than the poles.
- Winds blow in fairly steady directions.
- Summer and winter come and go through the year.

This sheet lines up what drives weather and climate. Each idea has a short worked example.

New ideas

■ 1 Global winds

The Sun heats Earth unevenly, so warm air rises at the equator and sinks near the tropics, creating **global wind patterns** 全球风带. The spinning Earth bends these winds –the **Coriolis effect** 科里奥利效应.

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A **watershed** 流域 is all the land that drains into a shared body of water. Whatever happens on that land –farming, paving, pollution –ends up in the water it drains into.

■ 3 Seasons come from the tilt

Seasons come from Earth's **tilted axis** (about 23.5°), not its distance from the Sun. The hemisphere tilted **toward** the Sun gets more direct light and longer days – summer.



■ 4 Climate patterns

Geography shapes climate: latitude, height, and nearness to oceans. Mountains create a **rain shadow** 雨影 (wet on the windward side, dry on the leeward side). **El Niño** 厄尔尼诺 and **La Niña** 拉尼娜 are shifts in Pacific temperatures that change rainfall worldwide.

Watch out: seasons are caused by the Earth's **tilt**, not by how close it is to the Sun. In fact the Earth is slightly closer to the Sun during the northern winter.

Practice

Try these in order. The methods are all above.

2.1 State what causes global wind patterns. [2]

2.2 State what a watershed is. [2]

2.3 Explain what really causes the seasons. [2]

2.4 Explain why one side of a mountain range is much drier than the other (a rain

shadow). [2]

2.5 State what El Niño and La Niña are. [1]
