

4 Rocks, soil, and the atmosphere — Part 1

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)		
plates	板块	_____	_____	_____
plate tectonics	板块构造	_____	_____	_____
Soil	土壤	_____	_____	_____
weathers	风化	_____	_____	_____
Erosion	侵蚀	_____	_____	_____
texture	质地	_____	_____	_____
atmosphere	大气层	_____	_____	_____
troposphere	对流层	_____	_____	_____
stratosphere	平流层	_____	_____	_____

Recall

You already know some earth science:

- Earthquakes and volcanoes happen where Earth's surface is active.
- Soil grows plants, and it can be washed or blown away.
- Air is mostly nitrogen and oxygen.

This sheet lines up Earth's rocks, soil, and air. Each idea has a short worked example.

New ideas

■ 1 Plate tectonics

Earth's crust is broken into **plates** 板块 that slowly move – **plate tectonics** 板块构造. Where they pull apart, collide, or slide past, you get earthquakes, volcanoes, and mountains.

■ 2 Soil and erosion

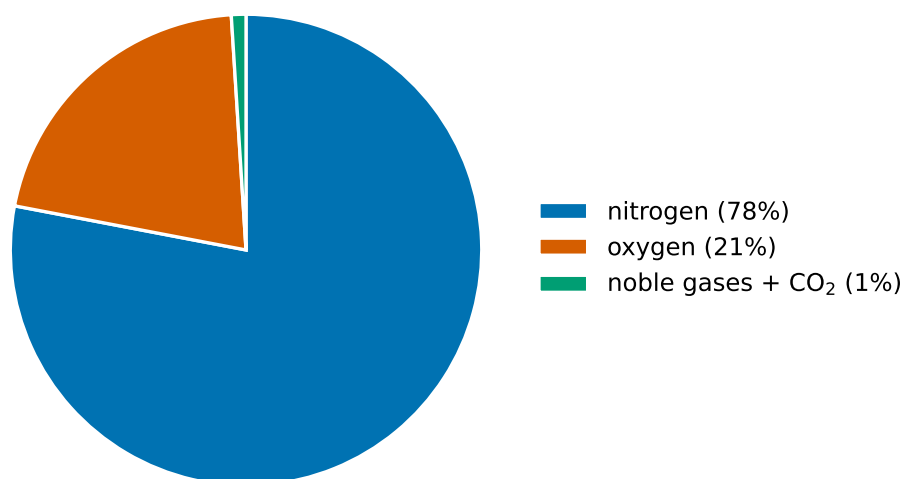
Soil 土壤 forms slowly as rock **weathers** 风化 and dead matter builds up. **Erosion** 侵蚀 is the removal of soil by wind and water, sped up when plants are removed (farming, deforestation).

■ 3 Soil texture

Soil is a mix of sand, silt, and clay – its **texture** 质地 – plus water and air. Texture controls how well soil holds water and nutrients; a balanced mix (loam) is best for plants.

■ 4 The atmosphere

The **atmosphere** 大气层 is layered: the **troposphere** 对流层 (where weather happens) and the **stratosphere** 平流层 (holding the ozone layer). It is about 78% nitrogen and 21% oxygen.



Watch out: soil forms extremely slowly (centimetres over centuries). If erosion removes it faster than it forms, the land loses a vital resource that cannot be quickly replaced.

Practice

Try these in order. The methods are all above.

2.1 Name two things that happen where Earth's plates meet. [2]

2.2 State the difference between weathering and erosion. [2]

2.3 Name the three particle types that make up soil texture. [1]

2.4 Name the two main gases in the atmosphere and their approximate percentages. [2]

2.5 Explain why soil erosion is such a serious problem. [2]
