

9 Ozone depletion and climate change

– 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)		
ozone layer	臭氧层	_____	_____	_____
ultraviolet	紫外线	_____	_____	_____
CFCs	氯氟烃	_____	_____	_____
Montreal Protocol	蒙特利尔 议定书	_____	_____	_____
greenhouse effect	温室效应	_____	_____	_____
greenhouse gases	温室气体	_____	_____	_____
methane	甲烷	_____	_____	_____
climate change	气候变化	_____	_____	_____

Recall

You have probably heard about these global problems:

- The "ozone hole" high in the atmosphere.
- Global warming and the greenhouse effect.
- Carbon dioxide building up from burning fuels.

This sheet lines up ozone depletion and climate change –two different problems. Each idea has a short worked example.

New ideas

■ 1 Ozone depletion

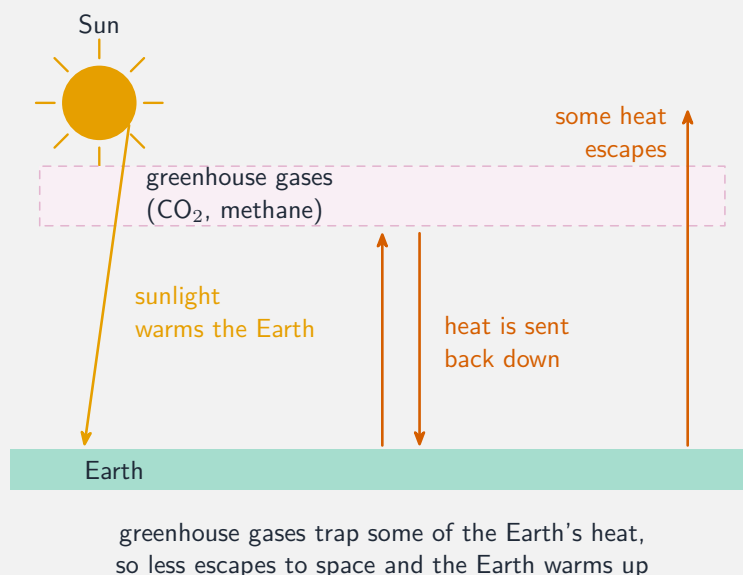
The **ozone layer** 臭氧层 high up absorbs harmful **ultraviolet** 紫外线 rays. **CFCs** 氯氟烃 (once used in fridges and sprays) destroy ozone, thinning it (the ozone hole) and letting more UV reach the surface.

■ 2 A rare success

The **Montreal Protocol** 蒙特利尔议定书 (1987) banned CFCs worldwide, and the ozone layer is slowly recovering –a rare environmental success story.

■ 3 The greenhouse effect

The **greenhouse effect** 温室效应 keeps Earth warm: **greenhouse gases** 温室气体 let sunlight in but trap the heat the Earth gives off. This is natural and makes Earth livable.



■ 4 Climate change

Humans add extra greenhouse gases –CO₂ from burning fuels and **methane** 甲烷 from livestock –strengthening the effect. This causes **climate change** 气候变化: warming, melting ice, rising seas, and more extreme weather.

Watch out: ozone depletion and climate change are **two different problems**. Ozone depletion is CFCs letting in more UV; climate change is greenhouse gases trapping more heat. Don't mix them up.

Practice

Try these in order. The methods are all above.

2.1 State what the ozone layer does and what damages it.

[2]

2.2 State why the Montreal Protocol is considered a success. [2]

2.3 Explain the natural greenhouse effect. [2]

2.4 Name two greenhouse gases and a human source of each. [2]

2.5 State one difference between ozone depletion and climate change. [2]
