



Year 9 Term 1 Geography Home Learning Booklet

Climate Change

Name: _____

Class: _____

Date: _____

Introduction

This booklet will help you understand key ideas about climate change. You will complete three main tasks covering:

- The greenhouse effect and its causes
 - The enhanced greenhouse effect
 - The effects and management of climate change
 - Carbon footprint
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Task 1: The Greenhouse Effect and Its Causes

Key Words Quiz

Fill in the meanings of these key words:

- Atmosphere: _____
 - Greenhouse effect: _____
 - Radiation: _____
 - Carbon dioxide: _____
 - Fossil fuels: _____
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Cloze Reading

Fill in the missing words from the box below:

Words: heat, atmosphere, sun, carbon dioxide, gases, energy

The _____ sends _____ to Earth. Some of this energy is absorbed, while some is reflected back into the _____. Greenhouse _____ like _____ trap some of this _____, keeping the Earth warm.

Comprehension Questions

1. What is the greenhouse effect? How does it work? Explain this in your own words.

2. Why is the greenhouse effect important for life on Earth?

3. Name two greenhouse gases.

4. What human activities increase greenhouse gases?

Flow Map

Draw a flow map showing how the greenhouse effect works:

(Use this space)

Task 2: The Enhanced Greenhouse Effect & Climate Change

Key Words Quiz – Write down the meanings

- Enhanced greenhouse effect: _____
 - Global warming: _____
 - Methane: _____
 - Deforestation: _____
 - Nitrous oxide: _____
-

Cloze Reading

Words: more, temperature, burning, trees, greenhouse gases

Human activities such as _____ fossil fuels and cutting down _____ increase _____. This traps _____ heat and raises Earth's _____.

Short Questions

1. What is the enhanced greenhouse effect? How does it differ from the greenhouse effect?
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2. How does deforestation contribute to climate change?
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3. Give one example of a greenhouse gas apart from carbon dioxide. How is it produced?
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Comprehension

Read the paragraph below and answer the questions.

Greenhouse gases are gases in the Earth's atmosphere that trap heat and help keep the planet warm enough for life. The main greenhouse gases include carbon dioxide (CO₂), methane (CH₄), water vapour, nitrous oxide (N₂O), and ozone. These gases allow sunlight to enter the atmosphere but absorb and re-radiate some of the heat that the Earth's surface emits back into space. This natural greenhouse effect maintains a stable climate; however, human activities such as burning fossil fuels, deforestation, and agriculture have increased the concentration of greenhouse gases in the atmosphere. As a result, more heat is trapped, leading to global warming and climate change, which can cause rising temperatures, melting ice caps, sea-level rise, and more extreme weather events.

1. What is increasing in the atmosphere? Why is it increasing?

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2. What is the result of more heat being trapped? Describe three likely impacts of this.
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Summary Writing

Write a short summary in your own words explaining the enhanced greenhouse effect. *Write with accuracy using capital letters for the start of sentences and proper nouns and secure full stops.*

Task 3: Effects and Management of Climate Change & Carbon Footprint

Key Words Quiz

- Climate change: _____
- Sea level rise: _____
- Carbon footprint: _____
- Renewable energy: _____
- Mitigation: _____

Cloze Reading

Words: rising, weather, carbon, renewable, reduce

Climate change leads to _____ temperatures, changing _____ patterns, and sea levels rising. Using _____ energy can help _____ our _____ footprint.

Short Questions

1. Give two effects of climate change – one must be social and one must be environmental.

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2. What is a carbon footprint? Why do carbon footprints vary?

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3. Describe three ways that individuals can reduce their carbon footprint.
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Comprehension

Climate change is increasing the frequency and severity of extreme weather events such as floods, droughts, heatwaves, and storms. As global temperatures rise, the atmosphere can hold more moisture, leading to heavier rainfall and an increased risk of flooding in some regions. In other areas, changing weather patterns can reduce rainfall and cause prolonged droughts, affecting water supplies, agriculture, and ecosystems. These changes can also threaten wildlife and habitats, as many plants and animals struggle to adapt to rapidly changing conditions. Rising temperatures, habitat loss, and more frequent extreme weather events can disrupt food chains, force species to migrate, and increase the risk of extinction for vulnerable plants and animals.

1. Name two extreme weather events.

2. Who or what is affected by climate change? Describe at least two things likely to be impacted by these changes.
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Summary Writing

Read the information below and write a paragraph explaining how climate change can be managed. *Write with accuracy using capital letters for the start of sentences and proper nouns and secure full stops.*

Climate change can be managed through a combination of mitigation and adaptation strategies. Mitigation involves reducing the amount of greenhouse gases released into the atmosphere by using renewable energy sources such as solar and wind power, improving energy efficiency, and protecting forests that absorb carbon dioxide. Individuals can also help by reducing waste, recycling, and using sustainable forms of transport. Adaptation focuses on preparing for the impacts of climate change, for example by building flood defences, developing drought-resistant crops, and improving water management systems. By working together at local, national, and global levels, people can reduce the causes of climate change and minimise its effects on communities, wildlife, and the environment.

Challenge

Create a poster or diagram showing how people can reduce their carbon footprint.

(Add your work below)