



PLANIT
TEACHERS

Exploring Global Warming and its Impact on the Great Barrier Reef

Introduction

This worksheet is designed to help you understand the impact of global warming on the Great Barrier Reef and the carbon cycle. You will learn about the causes and effects of global warming, and how it affects the reef and its inhabitants.

Multiple Choice Questions

Choose the correct answer for each question:

1. What is the main cause of global warming?
 - a. a) Burning of fossil fuels
 - b. b) Deforestation
 - c. c) Overpopulation
 - d. d) All of the above
2. What is the effect of rising sea temperatures on coral reefs?
 - a. a) Coral bleaching
 - b. b) Increased coral growth
 - c. c) No effect
 - d. d) Decreased coral growth
3. What is the role of the carbon cycle in regulating the Earth's climate?
 - a. a) It releases carbon dioxide into the atmosphere
 - b. b) It absorbs carbon dioxide from the atmosphere
 - c. c) It has no effect on the climate
 - d. d) It regulates the Earth's temperature

Short Answer Questions

Answer each question in 1-2 paragraphs:

1. Describe the process of coral bleaching and its impact on the Great Barrier Reef.

2. Explain the difference between a natural and anthropogenic factor that contributes to climate change.

3. What are some potential strategies for mitigating the effects of climate change on the Great Barrier Reef?

Essay Question

Discuss the impact of global warming on the Great Barrier Reef and its inhabitants. How can we mitigate the effects of climate change on the reef? (250-300 words)

Diagrams and Illustrations

Label and describe each diagram:



The Carbon Cycle



The Great Barrier Reef Ecosystem



The effects of coral bleaching on the Great Barrier Reef

Case Study

Read the case study and answer the questions:

The Impact of Climate Change on the Great Barrier Reef

1. What are the main causes of climate change affecting the Great Barrier Reef?

2. What are the effects of climate change on the reef and its inhabitants?

3. What can be done to mitigate the effects of climate change on the reef?

Group Activity

Design a Sustainable Coastal Community

Work in groups to design a sustainable coastal community that takes into account the impacts of climate change on the Great Barrier Reef. Consider the following factors:

- Renewable energy sources
- Coastal protection measures
- Waste management
- Conservation of marine biodiversity

[Space for group work]

Research Activity

Research and write a short report (150-200 words) on the impact of climate change on marine biodiversity, including the effects on coral reefs, fish populations, and other marine species.

Creative Activity

Create a Public Service Announcement (PSA) about *Climate Change and the Great Barrier Reef*:

1. Create a 30-second video or audio clip that raises awareness about the impact of climate change on the Great Barrier Reef and its inhabitants.
2. Consider the following themes:
 - The importance of reducing carbon emissions
 - The impact of climate change on marine biodiversity
 - The need for sustainable coastal management practices

[Space for creative work]

Reflection and Conclusion

Reflection: What did you learn from this worksheet about the impact of global warming on the Great Barrier Reef?

Conclusion: Summarize the main points learned from this worksheet and think about how you can apply this knowledge to your everyday life to help mitigate the effects of climate change.