



PLANIT
TEACHERS

Exploring Global Warming: Understanding its Impact on the Great Barrier Reef and the Environment

Student Name: _____

Class: _____

Due Date: _____

Introduction

Global warming is a critical issue that affects our planet and its ecosystems. In this worksheet, we will explore the impact of global warming on the Great Barrier Reef and the environment. We will learn about the causes and consequences of global warming, and discuss ways to mitigate its effects.

1. What is the main cause of global warming?

1. a) Natural climate variability
2. b) Human activities such as burning fossil fuels and deforestation
3. c) Volcanic eruptions
4. d) Changes in the Earth's orbit

Answer: b) Human activities such as burning fossil fuels and deforestation

2. What is the effect of global warming on the Great Barrier Reef?

1. a) Increased coral growth
2. b) Decreased sea temperatures
3. c) Coral bleaching and reduced biodiversity
4. d) Increased fish populations

Answer: c) Coral bleaching and reduced biodiversity

3. What is the carbon cycle?

1. a) The process by which carbon is released into the atmosphere
2. b) The process by which carbon is absorbed by the oceans
3. c) The process by which carbon is exchanged between the atmosphere, oceans, land, and living things
4. d) The process by which carbon is stored in fossil fuels

Answer: c) The process by which carbon is exchanged between the atmosphere, oceans, land, and living things

Short Answer Questions

1. What are some ways to reduce our carbon footprint and mitigate the effects of global warming?

2. How does global warming affect the water cycle and what are the consequences for human societies?

Essay Question

Discuss the impact of global warming on the Great Barrier Reef and the environment. What are the causes and consequences of global warming, and what can we do to mitigate its effects?

Activity - Carbon Footprint Calculator

Use the following carbon footprint calculator to estimate your daily carbon emissions:

Transportation: _____ miles driven per day

Energy consumption: _____ kWh per day

Water usage: _____ gallons per day

Waste generation: _____ pounds per day

Calculate your carbon footprint using the following formula:

Carbon footprint = (Transportation x 0.5) + (Energy consumption x 0.3) + (Water usage x 0.2) + (Waste generation x 0.1)

What are some ways you can reduce your carbon footprint?

Activity - Design a Sustainable Future

Imagine you are part of a team tasked with designing a sustainable city or community. What features would you include to reduce carbon emissions and mitigate the effects of global warming?

Read the following case study about the impact of global warming on the Great Barrier Reef:

"The Great Barrier Reef is one of the most biologically diverse ecosystems on the planet, providing habitat for thousands of species of fish, coral, and other marine life. However, the reef is facing numerous threats, including climate change, pollution, and overfishing. Rising sea temperatures are causing coral bleaching, which can lead to reduced biodiversity and ecosystem disruption."

What are some ways to protect the Great Barrier Reef and mitigate the effects of global warming?

Divide into groups and debate the following topic:

"Should governments prioritize economic growth over environmental protection in the face of climate change?"

Activity - Renewable Energy Sources

Research and present on a renewable energy source, such as solar, wind, or hydroelectric power. What are the benefits and challenges of this energy source, and how can it contribute to reducing carbon emissions and mitigating the effects of global warming?

Activity - Sustainable Land Use

Research and present on a sustainable land use practice, such as reforestation or permaculture. What are the benefits and challenges of this practice, and how can it contribute to reducing carbon emissions and mitigating the effects of global warming?

Conclusion

In conclusion, global warming is a critical issue that affects our planet and its ecosystems. We have learned about the causes and consequences of global warming, and discussed ways to mitigate its effects. We have also explored the impact of global warming on the Great Barrier Reef and the environment, and discussed ways to protect and preserve these ecosystems.

What have you learned from this worksheet, and what actions will you take to reduce your carbon footprint and mitigate the effects of global warming?