

General Public Module 1: Introduction to Climate Change

Lesson 1: Understanding Climate Change

Content:

Definition and explanation of climate change:

Climate change refers to significant, long-term changes in the global climate. It includes shifts in temperature, precipitation patterns, and other environmental effects that occur over several decades or longer. Climate change can result from natural factors, such as changes in the sun's intensity or slow changes in the Earth's orbit around the sun, as well as human activities, especially the burning of fossil fuels which increases heat-trapping greenhouse gas levels in the earth's atmosphere, leading to global warming.

Discussion on global climate change impacts with examples:

The impacts of climate change are global in scope and unprecedented in scale. Without drastic action today, adapting to these impacts in the future will be more difficult and costly.

Examples of these impacts include:

- Increasing temperatures which have been linked to the rise in heatwaves across the world.
- Altered patterns of weather and precipitation leading to severe weather conditions such as more intense hurricanes and floods.
- Rising sea levels that threaten the existence of low-lying island nations and coastal cities.
- Changes in ecosystems and wildlife patterns, affecting biodiversity and potentially leading to the extinction of certain species.

Activities:

Watch a short video: "What is Climate Change?" by NASA Climate Kids.

This engaging video provides a clear and concise introduction to the concepts of climate change, suitable for all ages. It explains the basic science behind climate change, its causes, and its potential impacts.

Interactive poll: What are your main concerns about climate change?

Participants will be asked to respond to a poll about their main concerns regarding climate change. This activity aims to engage participants and understand their perceptions and worries about climate change impacts.

Here's a detailed breakdown for Lesson 1 of the "General Public Module" titled "Understanding Climate Change," which aims to introduce participants to the fundamentals of climate change and its global impacts. This lesson is designed to be engaging and informative, suitable for a general audience without prior extensive knowledge on the subject.

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Lesson 1: Understanding Climate Change

Content:

1. Definition and Basic Concepts

Climate Change Defined: Explanation of what climate change is, focusing on the long-term alterations in temperatures and weather patterns. Discuss the distinction between climate change and natural variability.

Causes of Climate Change: Brief overview of the natural and anthropogenic factors contributing to climate change, emphasizing greenhouse gases and human activities such as deforestation, industrial processes, and fossil fuel combustion.

2. Global Impacts of Climate Change

Temperature Increases: Discussion on how global warming has led to rising average temperatures, more frequent and severe heatwaves, and altered precipitation patterns.

Melting Ice and Rising Sea Levels: Explore the consequences of melting glaciers and polar ice caps, and how these contribute to rising sea levels, affecting coastal communities and ecosystems.

Extreme Weather Events: Examine the increase in intensity and frequency of hurricanes, floods, and droughts globally.

Impact on Biodiversity: Discuss how changing climates are affecting wildlife habitats, leading to shifts in species distribution and the extinction of certain species.

Economic and Social Impacts: Overview of how climate change impacts agriculture, water supply, health, and leads to economic losses and displacement of communities.

Activities:

1. Watch a Short Video

Title: "What is Climate Change?" by NASA Climate Kids.

Purpose: This engaging and informative video provides a clear and concise introduction to the basic concepts of climate change, aimed at making the science accessible to all ages.

Action: After watching the video, encourage participants to share one new thing they learned about climate change.

2. Interactive Poll

Activity: Conduct a live poll asking participants, "What are your main concerns about climate change?"

Options could include: Rising sea levels, extreme weather events, impact on wildlife, health risks, economic impact.

Purpose: This activity aims to gauge participants' perceptions and concerns about climate change, fostering a discussion that connects their personal experiences and observations with the broader impacts of climate change.

Discussion: Follow up the poll with a group discussion to explore why participants chose their answers, encouraging them to relate personal experiences or news stories they've heard related to their concerns.

References & Examples:

NASA Climate Kids: NASA Climate Change and Global Warming

Intergovernmental Panel on Climate Change (IPCC) Reports: Provide a link to the summary of the latest IPCC report for detailed scientific data on climate change impacts.

Visual Aids: Use infographics and charts from reputable sources like the IPCC or NOAA to illustrate points about temperature changes, sea-level rise, and historical CO2 levels.

This lesson structure is designed to not only educate participants about the basic facts of climate change but also to engage them on a personal and emotional level, prompting them to think about how global changes affect their own lives and environments.