Summary

Paper 2 - 2.1 Global climate—vulnerability and resilience

Subject	Year	Start date	Duration
Geography	IB1	Week 3, February	4 weeks

Course Part

Causes of global climate change

Description

The atmospheric system, including the natural greenhouse effect and energy balance (incoming shortwave radiation and outgoing longwave radiation. Changes in the global energy balance, and the role of feedback loops, resulting from:

•solar radiation variations, including global dimming due to volcanic eruptions

•terrestrial albedo changes and feedback loops

•methane gas release and feedback loops The enhanced greenhouse effect and international variations in greenhouse gas sources and emissions, in relation to economic development, globalization and trade Synthesis, evaluation and skills opportunities The complexity of the dynamic climate system and the spatial interactions of different processes and feedback mechanisms

Curriculum

Aims

Encourage the systematic and critical study of: human experience and behaviour; physical, economic and social environments; and the history and development of social and cultural institutions

Objectives

Demonstrate knowledge and understanding of specified content

demonstrate knowledge and understanding of the core theme - global change

Demonstrate synthesis and evaluation

examine and evaluate geographic concepts, theories and perceptions

Syllabus Content

Part two: Geographic perspectives - global change (SL and HL core)

Unit 2: Global climate - vulnerability and resilience

1. Causes of global climate change

How natural and human processes affect the global energy balance

The atmospheric system, including the natural greenhouse effect and energy balance (incoming shortwave radiation

and outgoing longwave radiation)

Changes in the global energy balance, and the role of feedback loops, resulting from: solar radiation variations, including global dimming due to volcanic eruptions; terrestrial albedo changes and feedback loops; methane gas release and feedback loops

The enhanced greenhouse effect and international variations in greenhouse gas sources and emissions, in relation to economic development, globalization and trade

The complexity of the dynamic climate system and the spatial interactions of different processes and feedback mechanisms

ATL Skills

Approaches to Learning

Thinking

- In this unit, we will

  reward a new personal understanding, solution or approach to an issue

  ask open questions

Developing IB Learners

Learner Profile

Knowledgeable

Thinkers