





THIS IS THE THEMATIC FOCUS.
IT'S WHAT YOU SHOULD
FOCUS ON FOR THIS SECTION

#### **THEMATIC FOCUS**

### Humans and the Environments **ENV**

The environment shapes human societies, and as populations grow and change, these populations in turn shape their environments.

## **HISTORICAL DEVELOPMENTS**

### KC-6.1.II.A

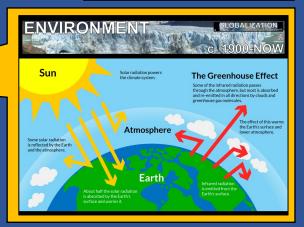
As human activity contributed to deforestation, desertification, a decline in air quality, and increased consumption of the world's supply of fresh water, humans competed over these and other resources more intensely than ever before.

### KC-6.1.II.B

The release of greenhouse gases and pollutants into the atmosphere contributed to debates about the nature and causes of climate change.









LET'S START WITH THE BASICS: CLIMATE VS. WEATHER:



# ENVIRONMENT

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# c. 1900-NOW

Sun

Solar radiation powers the climate system.

The Greenhouse Effect

Some of the infrared radiation passes through the atmosphere, but most is absorbed and re-emitted in all directions by clouds and greenhouse gas molecules.

Some solar radiation is reflected by the Earth and the atmosphere.

**Atmosphere** 

The effect of this warms the Earth's surface and lower atmosphere.

**Earth** 

About half the solar radiation is absorbed by the Earth's surface and warms it.

Infrared radiation is emitted from the Earth's surface.

# **IPCC CLIMATE CHANGE 2022 IMPACTS REPORT**



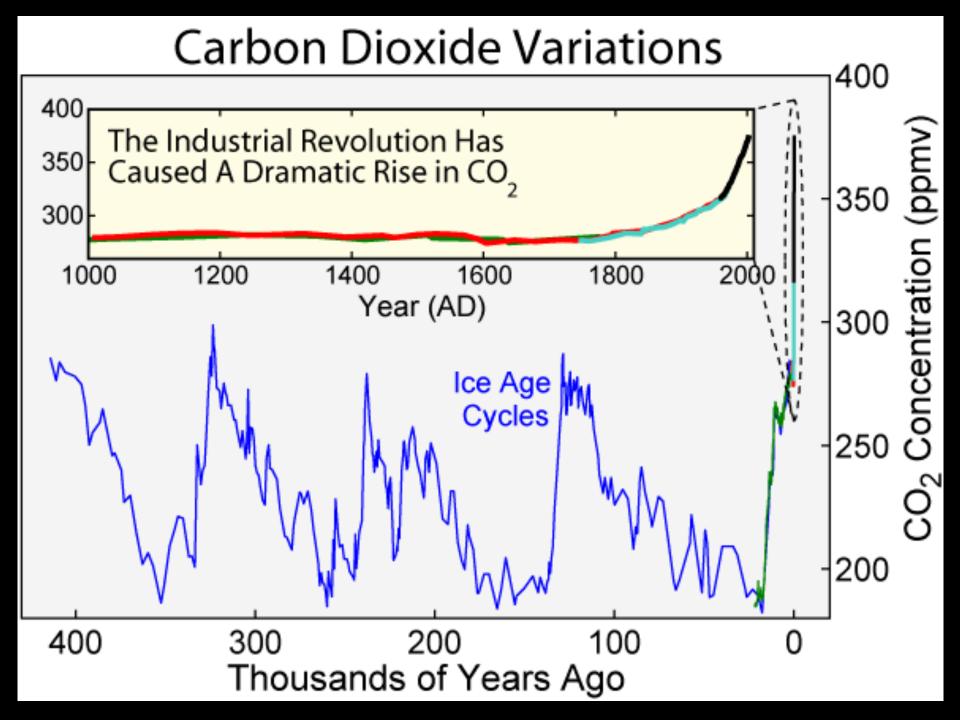
INTERGOVERNMENT PANEL ON CLIMATE CHANGE:34,000 STUDIES, 270 SCIENTISTS FROM 67 NATIONS

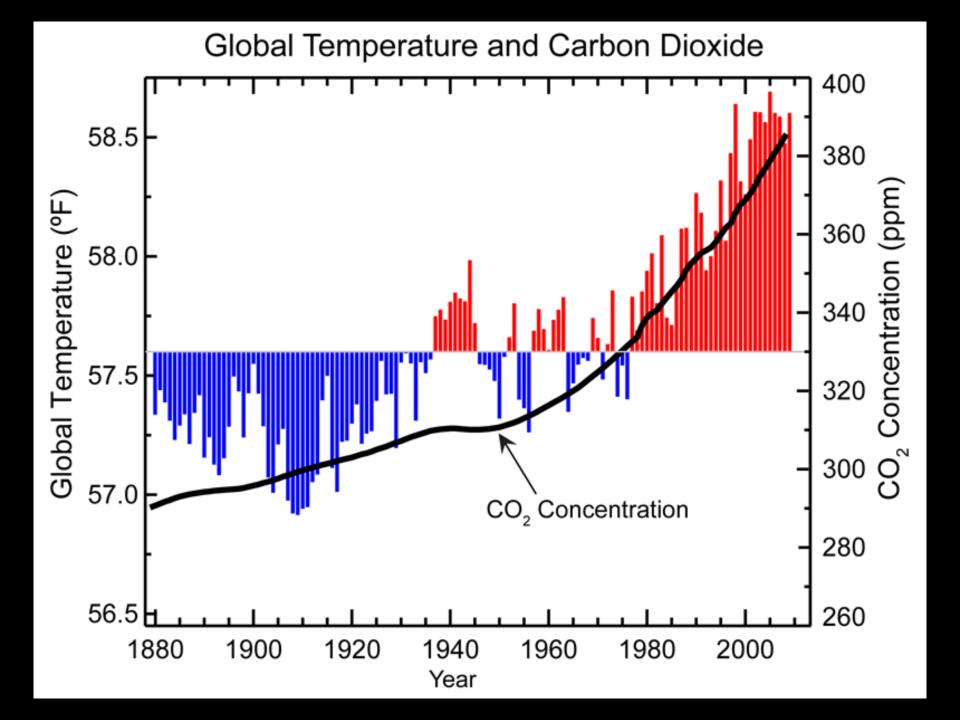
- 1. More widespread/severe than expected.
  - -Floods/fires create 20 million refugees per year
  - -Since 1961, Crop productivity in Africa shrunk by 1/3
  - -1/2 of all Humans face water insecurity for at least 1 month a year
  - -Massive species die-offs are increasing
- 2. Even if we completely decarbonize tomorrow, significant climate impact is locked in until at least 2040.
- 3. With 2 more degrees increase, 14% of remaining species will go extinct.
- 4. Climate Change impacts the Developing World at a much higher rate
  - -This will lead to mass migrations to the cities
- Many places have reached Hard Limits (no fix/solution will be able to repair)
- 6. The next few years provide a small window to create a sustainable planet.



THE 7<sup>TH</sup> REPORT IS DUE IN 2030







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