

Climate and Climate Change

What Causes Climate?

Climate Regions

Long-Term Changes in Climate

Global Changes in the Atmosphere

What Causes Climate?



What factors influence temperature?

- The main factors that influence temperature are latitude, altitude, distance from large bodies of water, and ocean currents.

What factors influence precipitation?

- The main factors that affect precipitation are prevailing winds, the presence of mountains, and seasonal winds.

What causes the seasons?

- The seasons are caused by the tilt of Earth's axis as Earth travels around the sun.

Climate Regions



What factors are used to classify climates?

- Scientists classify climates according to two major factors: temperature and precipitation.

What are the six main climate regions?

- There are six main climate regions: tropical rainy, dry, temperate marine, temperate continental, polar, and highlands.

Long-Term Changes in Climate



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What principle do scientists follow in studying ancient climates?

- In studying ancient climates, scientists follow an important principle: If plants or animals today need certain conditions to live, then similar plants and animals in the past also required those conditions.

What changes occur on Earth's surface during an ice age?

- During each ice age, huge sheets of ice called glaciers covered large parts of Earth's surface.

What factors can cause climate change?

- Possible explanations of major climate changes include variations in the position of Earth relative to the sun, changes in the sun's energy output, major volcanic eruptions, and the movement of the continents.

Global Changes in the Atmosphere



What events can cause short-term climate changes?

- El Niño and La Niña are short-term changes in the tropical Pacific Ocean caused by changes in ocean surface currents and prevailing winds.

How might human activities be affecting the temperature of Earth's atmosphere?

- Many scientists have hypothesized that human activities that add greenhouse gases to the atmosphere may be warming Earth's atmosphere.

How have human activities affected the ozone layer?

- Chemicals produced by humans have been damaging the ozone layer.