



## Temperature Over Time

### Temperature Over Time - Module Overview

#### Why Temperature Varies

Latitude and the Seasonal  
Temperature

Angle of Solar Radiation and  
Temperature

The Seasons

Water Influence on  
Temperature

Ocean Currents

Elevation

#### Methods for Measuring Recent Temperatures

#### Methods for Studying Past Temperature

#### Temperature Change Over Geologic Time

#### INVESTIGATION 1: Temperature Before the Industrial Revolution

#### INVESTIGATION 2: Temperature Since the Industrial Revolution

#### INVESTIGATION 3: Regional Temperature Patterns

### Why Does Temperature Vary?

You have learned that the global mean temperature is controlled by the balance of incoming energy from the sun and outgoing energy from Earth. However, as you also know, temperature varies from one location to another. What accounts for this variability? The temperature in a certain place is influenced by four main factors. The most important factor is a location's latitude, which is the angular distance, expressed in degrees and minutes, north or south of the equator. Other factors include the location's proximity to a body of water, the temperature of ocean currents if the location is near the coast, and the location's elevation above sea level.

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