

# Weather and Climate: Expedition with Finn the Dolphin

*Learning objective: To understand the difference between weather and climate, identify climate zones, and recognise key meteorological features.*

Read the front of each card to test your knowledge. Use the answers provided on the back to check your understanding. Pay close attention to the vocabulary definitions to help you with the extension tasks.

**What is the key difference between weather and climate?**

Weather describes the short-term state of the atmosphere at a specific time and place, whereas climate describes the average weather patterns in a region over a long period (usually 30 years or more).

**Explain why the regions near the Equator are generally warmer than regions near the North or South Poles.**

The Earth is a sphere, so sunlight hits the Equator directly, concentrating energy. Near the poles, sunlight hits at a slanted angle, spreading the energy over a larger area, resulting in colder temperatures.

**Define 'Precipitation' and give three examples.**

Precipitation is water released from clouds in the form of rain, freezing rain, sleet, snow, or hail.

**What are the three main climate zones of the Earth?**

The Tropical zone (near the Equator), the Temperate zone (between the tropics and the polar circles), and the Polar zone (near the North and South Poles).

**What is 'Latitude' and how does it influence a region's climate?**

Latitude is the distance north or south of the Equator. Generally, as latitude increases (moving away from the Equator), temperatures tend to decrease.

**Why do meteorologists use an anemometer?**

An anemometer is an instrument used to measure wind speed.

**Compare and contrast the climate of a desert with the climate of a rainforest.**

Both can have high temperatures, but they differ significantly in precipitation. Deserts receive very little rainfall, while rainforests have high humidity and frequent, heavy rainfall throughout the year.

**What is 'Humidity'?**

Humidity is the amount of water vapour present in the air.

**Justify why it is important for humans to study climate change.**

Studying climate change helps us prepare for changing weather patterns, protect ecosystems, manage agriculture, and develop sustainable ways to live on our planet.

**What might happen to the climate of a coastal town if the ocean temperature rises significantly?**

Warmer oceans can lead to increased evaporation, potentially causing more intense storms, higher humidity, and changes in the local rainfall patterns.

**Define 'Atmosphere'.**

The atmosphere is the layer of gases that surrounds the Earth, held in place by gravity, which protects us and helps regulate our climate.

**What is a 'Prevailing Wind'?**

The prevailing wind is the direction from which the wind usually blows in a particular place.