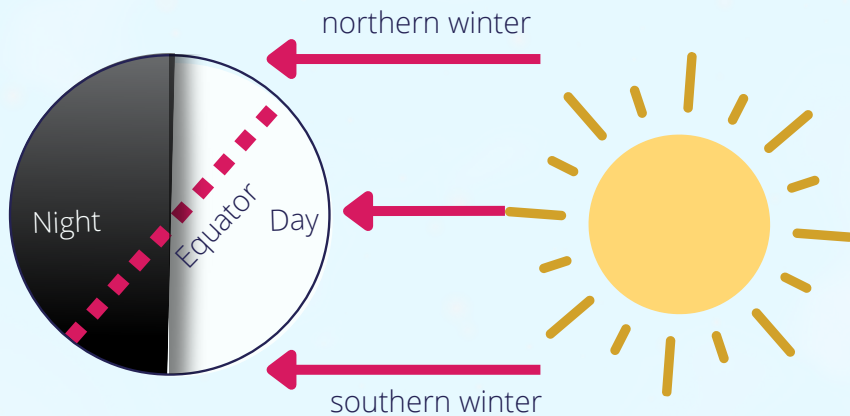


Arctic Weather and Climate: Why does it Matter?

Weather and **Climate** describes phenomena such as sunshine, temperature, wind and precipitation.

How does the angle of the Earth to the sun affect the seasons and amount of sunshine in **the Arctic**?



Like everywhere on Earth, the seasons in the Arctic are caused by the angle of the Earth to the sun.

The length of each day has a significant impact on the Arctic climate. The extra hours of sunlight in the summer greatly benefits life.

How **cold** does it get in The Arctic?

In winter, the thermometer here drops below minus 50°C. When it's minus 50°C, a cup of boiling water thrown into the air turns to ice crystals before it hits the ground.



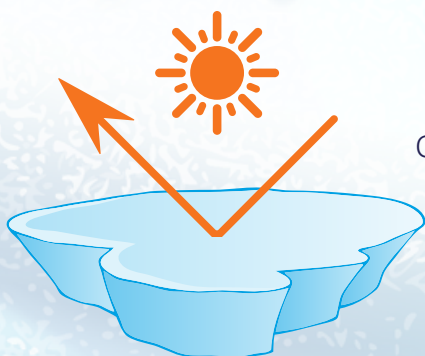
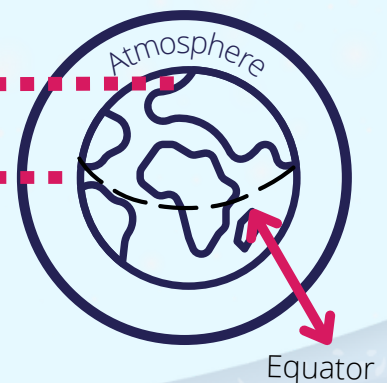
Why is the Arctic so **cold**?

The sun remains very low in the sky in the Arctic or does not rise at all.

Long Distance



Short Distance



The sea-ice, snow and polar caps in the Arctic reflect the rays of the sun



There are days in **The Arctic** when the sun never sets and days when the sun never rises.

Wind in the Arctic

Wind speeds average between 14 and 22 kilometres per hour in all seasons. Stronger winds do occur in storms, often causing whiteout conditions, but they rarely exceed 90 km/h in these areas.



The effects of **global warming** on the Arctic

The Arctic is warming more than twice as fast as the rest of the planet. Rising temperatures in the Arctic have effects on the climate of the Arctic and the entire globe.

We are losing Arctic sea ice at an alarming rate

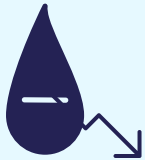
Loss of sea ice could effect the currents of the ocean, thus further effecting global weather patterns. Most at risk: Organisms who rely on sea ice for survival



What happens if glaciers and polar ice caps **melt**?



Rising sea levels



Reduction of salt in the ocean ocean



Changes in the ocean's circulation



Hazards for shipping

By **2040 - 2050**, summers in the Arctic could be **ice-free** ⚠️