



# Phase 3 – Polar Regions



## Polar Climates

Polar climates have temperatures which are usually below freezing and can reach  $-60^{\circ}\text{C}$  in winter. Polar areas are usually covered by snow and ice throughout the year.

The Arctic region has cold winters and cool summers. Average Arctic temperatures range from  $-43^{\circ}\text{C}$  to  $13^{\circ}\text{C}$  depending on the season and location. The Antarctic region has cold winters and cool summers. Antarctica is the coldest, windiest and driest place on Earth. Average temperatures range between  $-60^{\circ}\text{C}$  and  $-20^{\circ}\text{C}$ .

## Polar Oceans



The Arctic Ocean is located around the North Pole within the Arctic Circle in the Northern Hemisphere. The temperature of the Arctic Ocean remains at just above the freezing point of salt water throughout the year. Sea ice, glaciers and icebergs are typical physical features of this area of ocean.

The Southern Ocean surrounds the continent of Antarctica and the Antarctic Circle in the Southern Hemisphere. The Southern Ocean is contained in a polar climate, which means the area has persistent cold temperatures. Ice shelves, glaciers and icebergs are typical physical features of this area of ocean. The Southern Ocean is different from all other oceans of the world because it has a strong ocean current, called the Antarctic Circumpolar Current, which circles Antarctica. This happens because Antarctica is not connected to any other landmass. It makes the Southern Ocean the coldest and windiest in the world.

## Key Vocabulary



**CLIMATE:** Long-term pattern of weather conditions found in a particular place



**CURRENT:** A steady and continuous flowing movement of some of the water in a river, lake, or sea.



**GLACIER:** An extremely large mass of ice which moves very slowly



**ICEBERG:** A large tall mass of ice floating in the sea



**ICE FIELDS:** A very large flat area of ice floating in the sea.



**INDIGENOUS:** People who belong to the country in which they are found, rather than coming there or being brought there from another country.

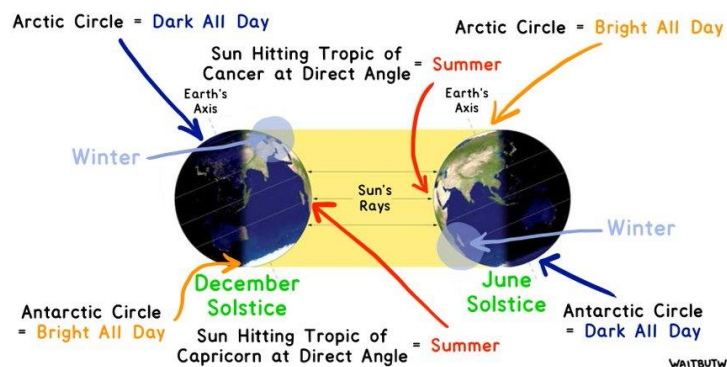


**MOUNTAIN:** A raised pieces of land that are usually covered in snow and ice



**TUNDRA:** Land where it is too cold for trees to grow as the ground is permanently frozen (permafrost).

## Polar Day and Night



The polar regions experience the largest differences in daylight, as the effect of the Earth's tilt is much more pronounced. It is the tilt towards the Sun that creates near-constant daylight, known as polar day or Midnight Sun. The tilt away from the Sun creates near constant darkness, known as polar night.

## Polar Landscapes



The Arctic is a sea of ice surrounded by land and located at the highest latitudes of the Northern Hemisphere. It extends over the countries that border the Arctic Ocean, including Canada, the USA, Denmark, Russia, Norway and Iceland. Antarctica is a continent located in the Southern Hemisphere. Antarctica does not belong to any country. Physical features typical of the Arctic and Antarctic regions include glaciers, icebergs, ice caps, ice sheets, ice shelves and sea ice.