



## ARTIC OCEAN SCIENTIFIC ADVENTURES

### EDUCATIONAL PACKAGE

NO.01

#### General concepts of the Arctic Ocean



#### Hints

Use an atlas or the Internet to find the answers to the above questions, but don't forget to site your information sources.

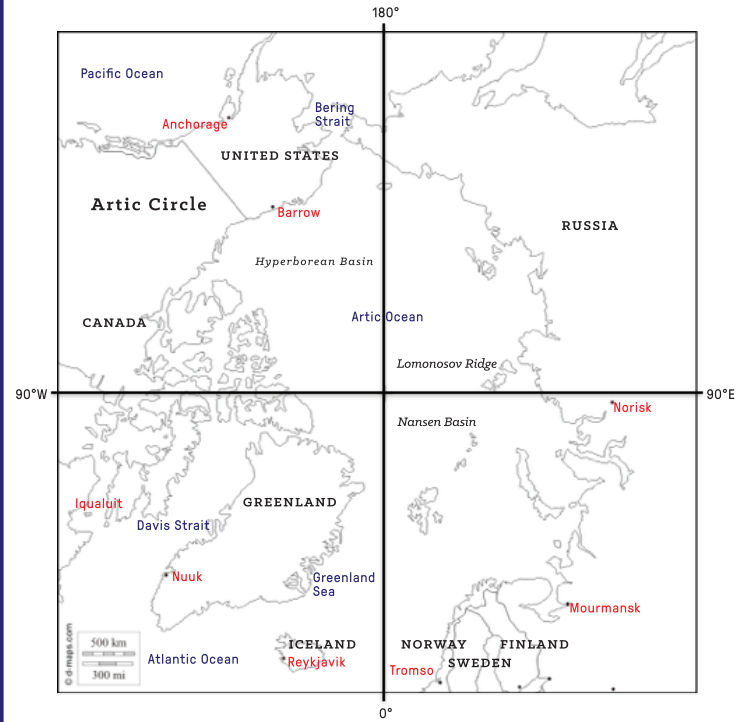
Don't write too big or you will not have enough space to clearly identify all of the elements.

### POINTS OF REFERENCE

It is rare to see a map centered on the North Pole. To familiarize yourself with the Arctic, fill in the following information:

- Give the map a title
- Draw and identify the longitudes  $0^\circ$ ,  $180^\circ$ ,  $90^\circ\text{E}$  and  $90^\circ\text{W}$
- Draw and identify the latitude of the Arctic Circle at  $66^\circ\text{N}$
- Identify the Arctic, Pacific and Atlantic Oceans in blue
- Identify Davis Strait, Bering Strait and the Greenland Sea in blue
- Write the names of the riparian countries in capital letters and identify them in different colours: Canada, United States (Alaska), Denmark (Greenland), Russia, Norway, Finland, Sweden, Iceland
- Write the names of the major Arctic cities in red: Iqaluit (Nunavut), Reykjavik (Iceland), Barrow and Anchorage (Alaska), Nuuk (Greenland) Tromsø (Norway), Murmansk and Norilsk (Russia)
- BATHYMETRY CHALLENGE: do you know the location of the Hyperborean Basin, the Nansen Basin and the Lomonosov Ridge, an undersea mountain range?

#### Titre : Map Of The Arctic

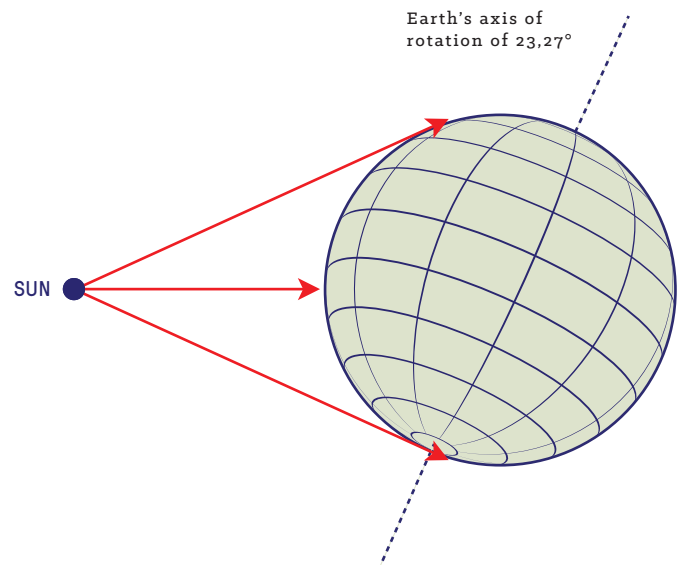


### THE ASTRONOMICAL COLD!

The cold is definitely the main feature of the Arctic. To explain this we must refer to notions of astronomy. Complete the diagram below by adding the sunlight on the poles and the equator and then write a short explanation.

1. The angle of incident radiation: the sun's rays reach the poles obliquely.
2. Energy dispersion at the Earth's surface: for a given ray of sunlight, energy is more dispersed at the poles.
3. Distance traveled by the ray of sunlight: the distance to the poles is longer so the energy loss is greater.

#### Titre : Why is it cold at the poles?



## VOCABULARY QUESTIONS

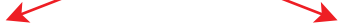
Connect each term with the  
correct description:

1. ICE SHEET



a) Ice fragmented due to the movement of the sea. The pieces thus formed allow animals to get warm and rest.

2. BREAKUP



b) Layer of ice that forms on the surface of a body of water and the surface varies with the seasons.

3. DRIFT ICE



c) Large thick ice crust carried away by currents.

