



ICT Project Plans

POLE TO POLE

These project plans are designed to be used alongside the accompanying resource sheets.
(please note: a CD resource does not accompany this resource pack, all resources are provided below)

ICT Project 1: Ice cold word banks (Key Stages 1 and 2)

Aims of the lesson: To develop an understanding that text can be entered into a computer and printed out (developing keyboard skills) and to learn that text can be selected from a word bank.

Activity: To familiarise the pupils with using the computer, explain that they are going to type their name into the computer using the keyboard. Show the pupils how to press a key, with a light but firm press, and not hold down their finger. Demonstrate how to use the delete/backspace key if they have mistyped or repeated a letter. Print their names and ask them to add a picture of themselves.

Next, prepare a word bank relating to either Antarctica or the Arctic. Include words such as polar, hemisphere, glacier, continent, peninsula, snow, ice, polar bears, penguins etc. To help you find words for your own word banks, the **ICT Project 1 folder** on the accompanying CD includes two polar word banks.

Produce this word bank on-screen using Word. Explain to the class that each of them will choose a word from the bank on screen and then give some information about it. Print the words from the word bank onto paper and ask the pupils to find a picture (from the Internet) to use with the word. Next, explain to the pupils that they are going to use the skills they have learnt to produce a piece of text about the North or South Pole. Ask them to select the initial sentence and then to add their choice of words. The words could be chosen from a word bank. Print the work.

Point to note

Children should listen to all words before making a selection. Some children may find it helpful if the mouse buttons are labelled.

Other ideas: As an extension to this project, ask the pupils to create short stories using their word banks and any clip art available.

If you would like the word lists as Word documents, please email editor@imaginativeminds.co.uk

ICT Project 2: Labelling and classifying (Key Stages 1 and 2)

Aims of the lesson: To recognise that polar animals have characteristics; provide information about polar animals; and describe polar animals using key words.

Activity: Carrying on from the work done above in the ICT Project 1, prepare a word bank containing the names, shapes, sizes and colours of different polar animals. Explain to the class that each of them will choose an animal on screen and then give some information about it.

Ask the pupils, one at a time, to choose an animal and then to click on the appropriate name, size and colour in the word bank. Print the information onto labels

and ask each pupil to label their animal. The animals could then be displayed.

The page opposite offers four pictures of some polar animals – a polar bear, a reindeer, an arctic wolf and an arctic fox. This page and some images can be found in the **ICT Project 2 folder** on the accompanying CD-ROM. The folder also includes information sheets on some polar animals (fox, wolf, polar bear and reindeer/caribou) – to help with the pupils' own research.

Other ideas: Ask the pupils to classify some of the animals according to bird, fish or mammal.



Pole to Pole

ICT Project 1:
Ice cold word banks

Key Stages 1 & 2





Antarctic word bank

Atmosphere – The gases that surround a planet.

Avalanche – A mass of snow and/or ice detached from where it rested and slipping down a slope.

Blizzard – A cold storm with winds of at least 56 kilometres per hour (35 miles per hour) and temperatures below - 6.7 degrees Centigrade (20 degrees Fahrenheit).

Calve – The formation of an iceberg from a glacier.

Desert – An area where there is little moisture due to there being little precipitation is low and evaporation is high. Precipitation usually is less than 25 centimetres a year (10 inches). Large deserts include the Sahara Desert in Northern Africa or the continent of Antarctica.

Gale – A strong wind. Gales are common in Antarctica.

Glacier – A river of ice. Usually a mixture of ice, air, water, and rock debris formed at least partially on land.

Ice cap – A large dome-shaped mass of ice that is thick enough to cover all the landscape beneath it so appearing as a smooth coating of ice. Ice caps are smaller than ice sheets, usually under 50,000 square kilometres (19,000 square miles).

Ice sheet – A large mass of ice that is thick enough to cover the landscape beneath it so appearing as a smooth coating of ice.

Ice shelf – A large flat-topped sheet of ice that is attached to land along one side and floats in the sea or a lake.

Ice stream – A rapidly moving current of ice in an ice sheet or ice cap.

South geographic pole – The south geomagnetic pole is tilted about 12 degrees to the axis of rotation of the Earth (geographic pole).

South magnetic pole – the point on Earth's surface that a south-seeking compass needle seeks. At the South magnetic pole a compass needle will point vertically downwards. This point is currently off the coast of Wilkes Land and wanders around.



Arctic word bank

Bay-Ice – Ice newly formed upon the surface of the sea.

Blink – A peculiar brightness in the atmosphere, often assuming an arch-like form.

Brash – Ice broken up into small fragments.

Field – A sheet of ice generally of great thickness, and of too great extent to be seen over from a ship's masthead.

Fjord – An abrupt opening in the coast-line admitting the sea.

Glacier – A mass of ice derived from the atmosphere, sometimes abutting the sea.

Hummock – A mass of ice rising to a considerable height above the general level of a floe, and forming a part of it. Hummocks are originally raised by the pressure of floes against each other.

Iceberg – A large floating mass of ice detached from a glacier.

Pack – A large body of ice, consisting of separate masses, lying close together, and whose extent cannot be seen.

Sludge – Ice that is the consistency of thick honey and does not pose a significant problem for ships.



Pole to Pole

ICT Project 2:
Labelling and
classifying

Key Stages 1 & 2







Information sheet: Arctic fox

- Height: Height at shoulder 10–12 inches (25–30 cm.)
- Weight: They weigh from 6 to 10 pounds.
- Colour: Normally white in winter and brownish grey in summer.
- The arctic fox has the warmest fur of any mammal, even warmer than the polar bear and arctic wolf.
- They live in Northern and western Alaska and Canada Northern Canada south to northern Northwest Territories, northeast Alberta, northern Manitoba, northern Quebec, Russia, and Greenland.
- Arctic fox feed primarily on small mammals, including lemmings and tundra voles. Fox denning near rocky cliffs along the seacoast often depend heavily on nesting seabirds such as auklets, puffins, and murre.
- Arctic fox can be either gray-blue or white.
- The arctic fox's adaptation to its subzero habitat include a compact body with short legs, short ears, dense fur, and thickly haired foot pads, which insulate against the cold and provide traction on ice.



Information sheet: Polar bears

- The polar bear is one of the largest four-footed carnivores on Earth and can live up to 25 years. Although the polar bear's coat appears white, each individual hair is actually a clear hollow tube that channels the sun's energy directly to the bear's skin and helps it stay warm. The polar bear's entire body is furred, even the bottom of its paws. That helps prevent bears from slipping on the ice.
- Males are 8 to 11 feet long and weigh 500 to 1,100 pounds but can reach as much as 1,500 pounds. Females are smaller, measuring 6 to 8 feet long, and weigh from 350 to 600 pounds, occasionally reaching 700 pounds.
- Worldwide there are thought to be 22,000–27,000 polar bears in 19 separate populations. They can be found in the United States, Canada, Russia, Greenland and on the Arctic islands of Norway. There are estimated to be about 3,000 to 5,000 polar bears in Alaska.
- Polar bears are found throughout the Arctic and are the most nomadic of all bear species. They travel an average of 5,500 miles a year or 15 miles a day. In the United States, polar bears are located in two Alaskan populations: the Chukchi/Bering Seas of western Alaska and the Beaufort Sea off northern Alaska.
- Polar bears are strictly carnivores and feed or scavenge only meat. Their primary prey is the ringed seal though they also take bearded, harp and hooded seals and the occasional walrus youngster. They will also scavenge walrus and whale carcasses.

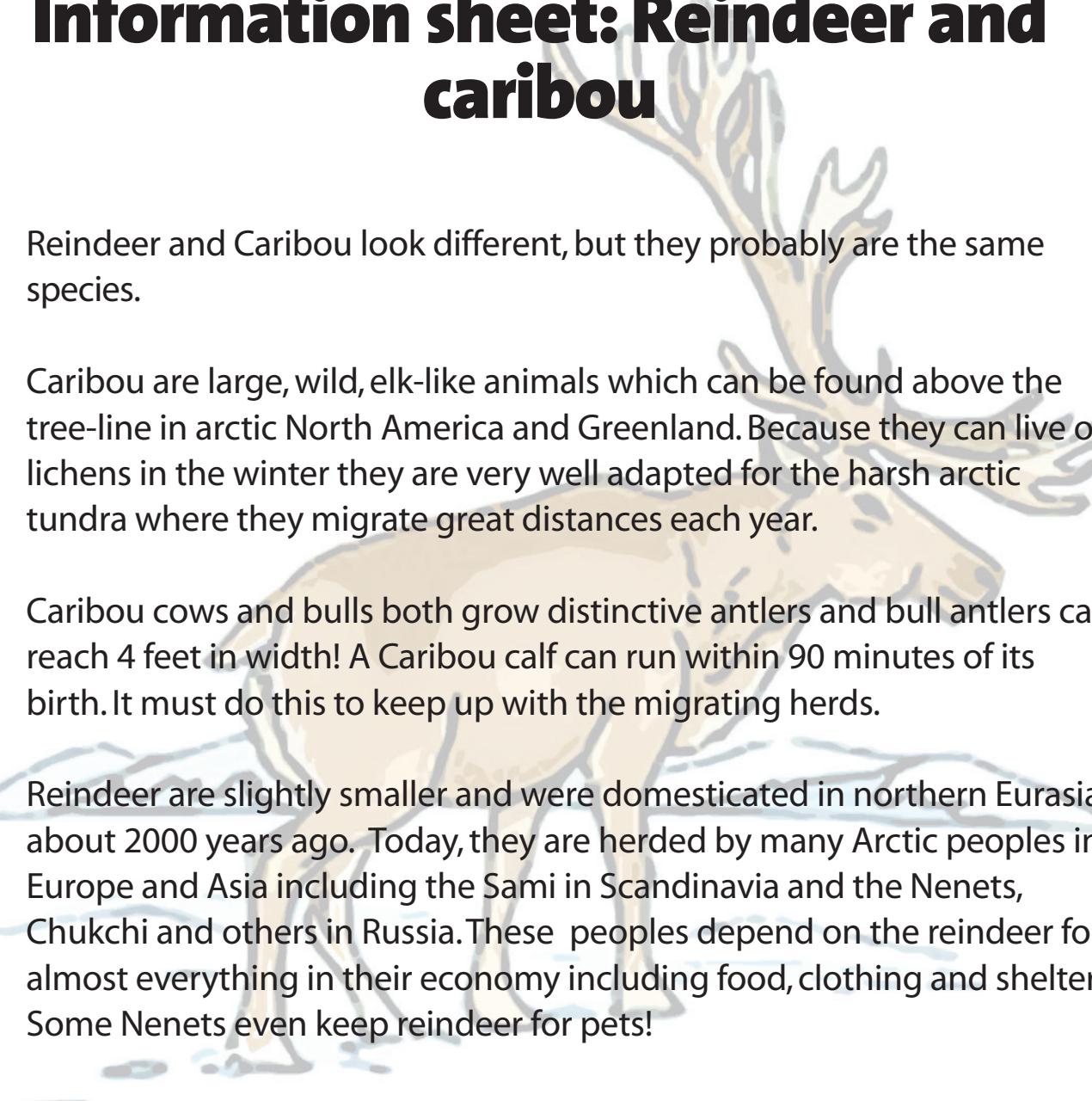


Information sheet: Arctic wolf

- The Arctic Wolf (*Canis lupus arctos*) is a wild dog that lives in the Canadian Arctic. This wolf is a subspecies of the grey wolf and is sometimes called the tundra wolf.
- It is a fast-running carnivore (a meat-eater) that lives alone or in packs of about 6 wolves. The Arctic Wolf lives about 10–15 years in the wild; it lives about 20 years in captivity.
- Wolves howl as a signal to other wolves, telling of the beginning and ending of a hunt, of a wolf separated from its pack, as a warning to other wolf packs, and simply for the fun of it.
- Arctic Wolves are smaller than other wolves and have long, thick white fur. Adults are about 3 ft (0.9 m) long plus a 1 ft (30 cm) long tail. Like other wolves, they have strong jaws with sharp teeth, including long canine teeth which tear flesh. Wolves have very good eyesight, acute hearing, and a keen sense of smell which help them hunt.
- Wolves hunt in packs and often prey upon animals that are much larger than they are. They mostly eat caribou, and they kill their prey with a devastating bite on the neck. Wolves almost never attack people. They swallow food in large chunks, barely chewing it. Wolves can eat up to 20 pounds (9 kg) of meat at one meal. When they return from the hunt, wolves regurgitate some of the food for the hungry pups.



Information sheet: Reindeer and caribou

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- Reindeer and Caribou look different, but they probably are the same species.
 - Caribou are large, wild, elk-like animals which can be found above the tree-line in arctic North America and Greenland. Because they can live on lichens in the winter they are very well adapted for the harsh arctic tundra where they migrate great distances each year.
 - Caribou cows and bulls both grow distinctive antlers and bull antlers can reach 4 feet in width! A Caribou calf can run within 90 minutes of its birth. It must do this to keep up with the migrating herds.
 - Reindeer are slightly smaller and were domesticated in northern Eurasia about 2000 years ago. Today, they are herded by many Arctic peoples in Europe and Asia including the Sami in Scandinavia and the Nenets, Chukchi and others in Russia. These peoples depend on the reindeer for almost everything in their economy including food, clothing and shelter. Some Nenets even keep reindeer for pets!
 - Reindeer were introduced into Alaska and Canada last century, but most attempts failed. Native peoples in these countries still prefer to hunt caribou rather than herd reindeer.
 - Reindeer and caribou have unique hairs which trap air providing them with excellent insulation. These hairs also help keep them buoyant in the water. They are very strong swimmers and can move across wide rushing rivers and even the frozen ice of the Arctic Ocean!