

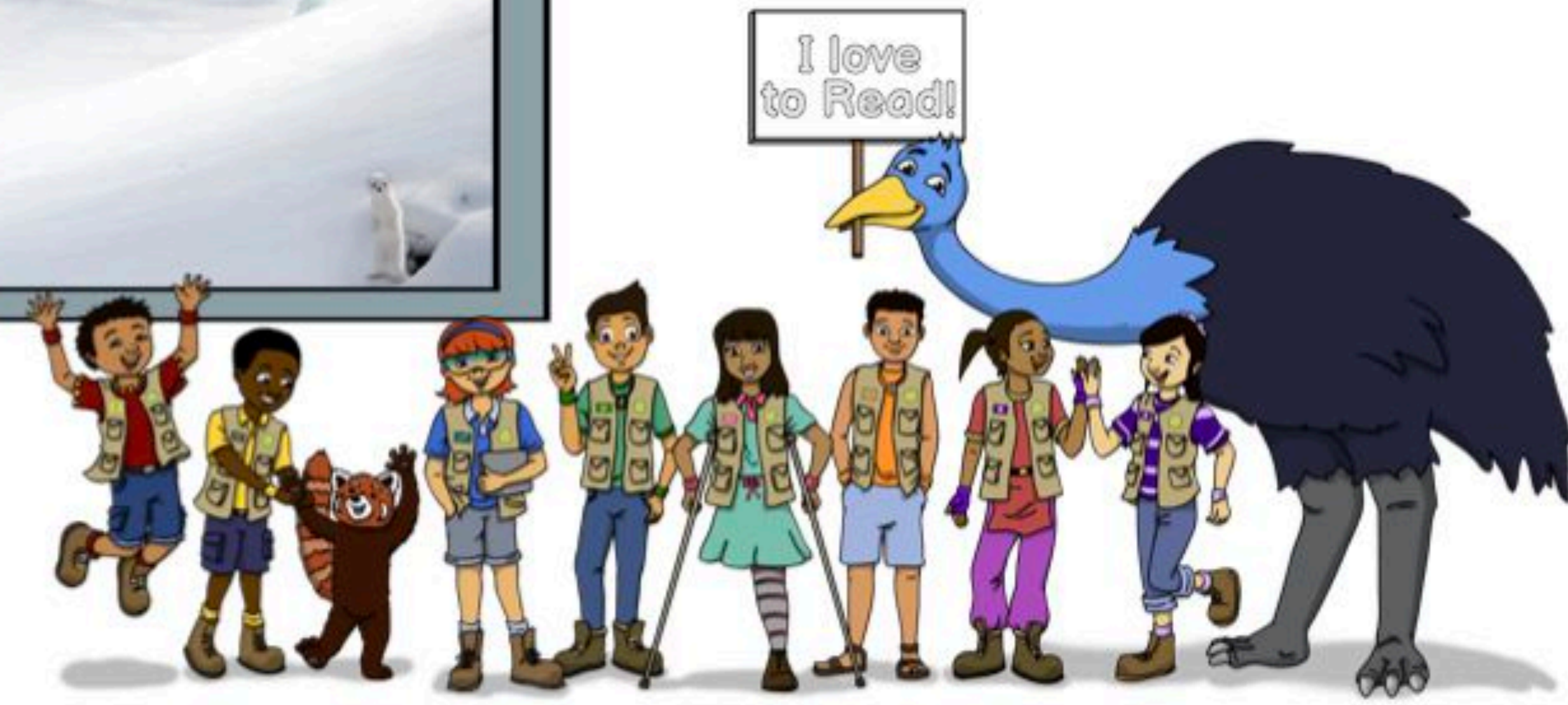
# Vowel Syllable Pattern Chart

Long Vowel Digraph Vowel Team		Variant Vowel Vowel Team		Diphthong Vowel Team		
freezing	heat	grayish	food	hawks	out	choices
meat-eater	keep	gray	shrews	paws	found	
creeping	year	chain	choose		brown	
sneaky	near	snow	roots		owl	
eat	means	coat	woody		pounce	
leaves	deer	known	new		round	
trees	green	stoat	few		outer	
keen		slowly	snow-proof			
each		snowy				



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Datz



Peg

## Characters

## Glossary

**Predator** (*noun*) an animal that hunts or eats other animals.

**Prey** (*noun*) an animal that is hunted and eaten by another animal for food.

**Rodent** (*noun*) a type of small mammal that includes rats, mice, squirrels, lemmings; distinctive characteristics are long, sharp front teeth that they use for gnawing.

**Scarce** (*adjective*) not enough for what is needed.

**Survive** (*verb*) to remain alive;

**Tundra** (*noun*) a large treeless Arctic area of Europe, Asia, and North America in which the ground is permanently frozen.



# Glossary

**Consistent** (*adjective*) regular and steady, does not change.

**Distinctive** (*adjective*) having a special quality or characteristic.

**Ermine** (*noun*) a short-tailed weasel, also known as a stoat.

**Garment** (*noun*) a piece of clothing.

**Herbivore** (*noun*) an animal that eats plants for their diet.

**Insulation** (*noun*) the material that keeps the heat inside;

**Insulate** (*verb*) to prevent the loss of heat.

**Mammal** (*noun*) a warm-blooded animal that has hair or fur, females give birth to live young and nurse their young.

**Molt** (*verb*) to shed old feathers, hair, or skin, or an old shell, to make way for a new growth.

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# 1. Adapting to the Arctic Habitat



## Glossary

**Abundant** (*adjective*) available in large amounts; plentiful.

**Adapt** (*verb*) to change in a physical or behavioral way in order to survive in a habitat; if you adapt to an environment, you change something in order to live.

**Arctic hare** (*noun*) a species of the rabbit family adapted to living in the Arctic tundra.

**Arctic fox** (*noun*) a small fox that lives in the Arctic regions of the Northern Hemisphere and throughout the Arctic tundra.

**Camouflage** (*noun*) the way in which some animals are colored and shaped so that they cannot easily be seen in their natural surroundings;  
(*verb*) to disguise oneself to blend into the surroundings.

**Carnivore** (*noun*) an animal that eats meat for their diet.

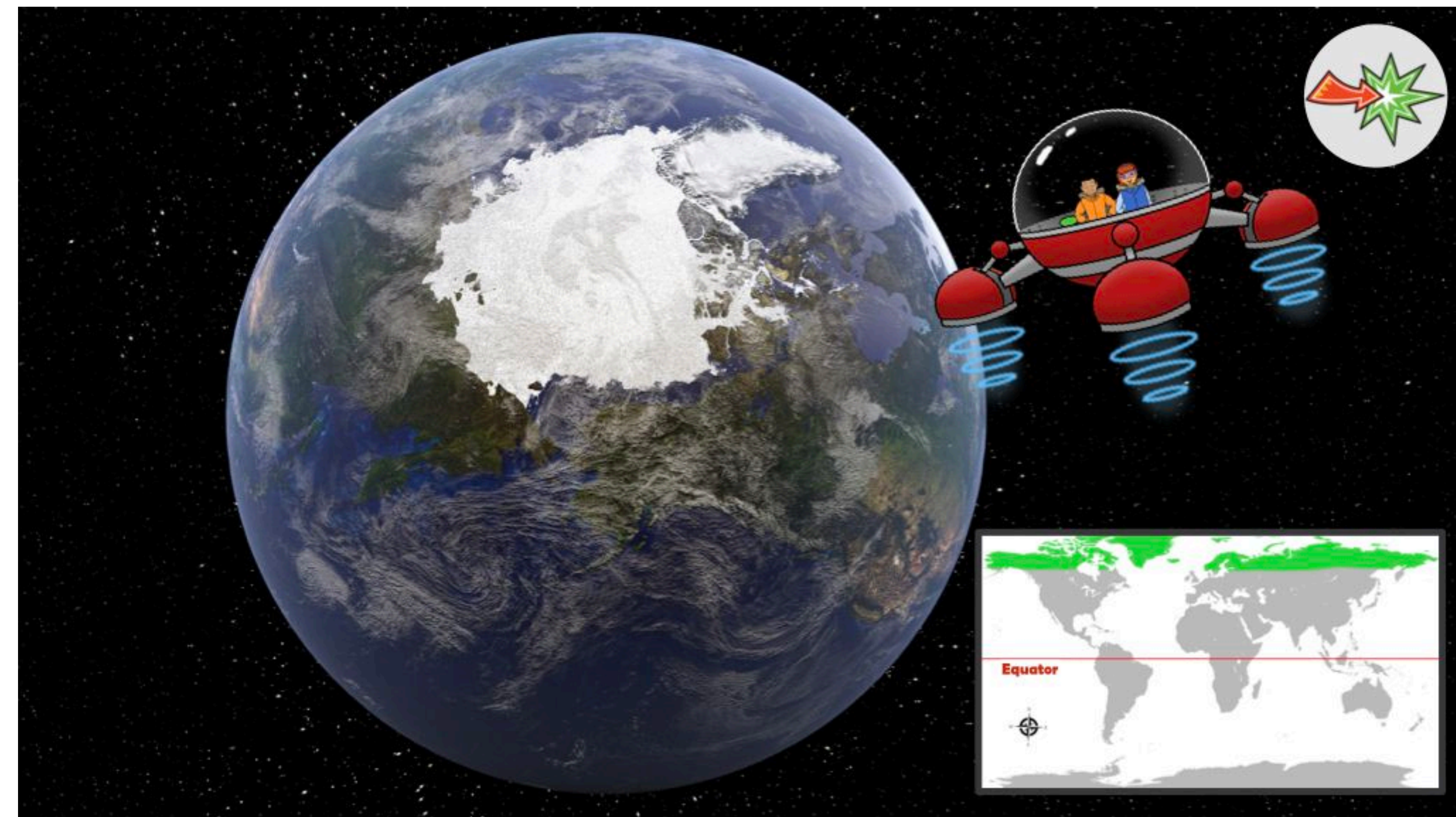
**Characteristic** (*noun*) a feature of a person, place, or thing used to identify it.





## Learning from Arctic Animals

Most people are familiar with a green and brown camouflage pattern. But did you know the US Marine Corps developed a SNOW camouflage pattern to wear in snowy regions of the world? The pattern is called Disruptive Overwhite. It has a white background with gray digital shapes on nylon fabric. In addition, the nylon is lightweight, blocks wind, and repels the rain or snow. The **garments**, such as shirts, pants, and jackets, do more than assist with camouflage. In fact, they also help keep a person's body temperature comfortable with special features such as zippers, flaps, or drawstrings. Today, people can purchase these garments in many stores all over the world.



## Adapting to Freezing Temperatures

The animals of the Arctic Circle **adapt**, or change, to **survive** the cold, harsh winters. When the temperatures drop and snow falls, many animals in the Arctic must change their summer fur to a winter coat. Their food choices also change depending on what is available in the snow-covered **tundra**, the coldest of all habitats on Earth.





## Changing Colors with the Seasons

The fur of some Arctic animals changes from the woodland colors of the fall to pure white like winter snow. If they kept their woodland colors, these Arctic animals would stand out in the white snow and they would be unprotected. So, their fur must change to white. As a result, the animals can hide in the snow from their enemies and search safely for food.

Therefore, when animals change their colors to blend in with the season, they are more likely to survive.





## Staying Warm and Dry!

As winter approaches, the thickness of the Arctic wolf's coat changes. The coat has inner and outer hairs. The inner hairs are shorter and softer for **insulation**. The longer outer hairs act as a water- and snow-proof layer. The two types of hair keep the Arctic wolf warm and dry. The hairs become thicker as temperatures drop. Similarly, the hairs on its paws also **insulate** them from snow and ice.





## Changing from Reddish Brown to White

An ermine, also known as a stoat, is a small **mammal** that belongs to the weasel family. It is found in the Arctic parts of North America, Europe and Asia. The color of their fur depends on the season. During the spring and summer months, the ermine has reddish brown fur on its back and white fur on its belly. Then, as it prepares for the snowy winter, its coat changes entirely to white. This winter coat provides the ermine with **camouflage** to hide from its **predators**. Some enemies include the snowy owl, Arctic fox, and hawks.



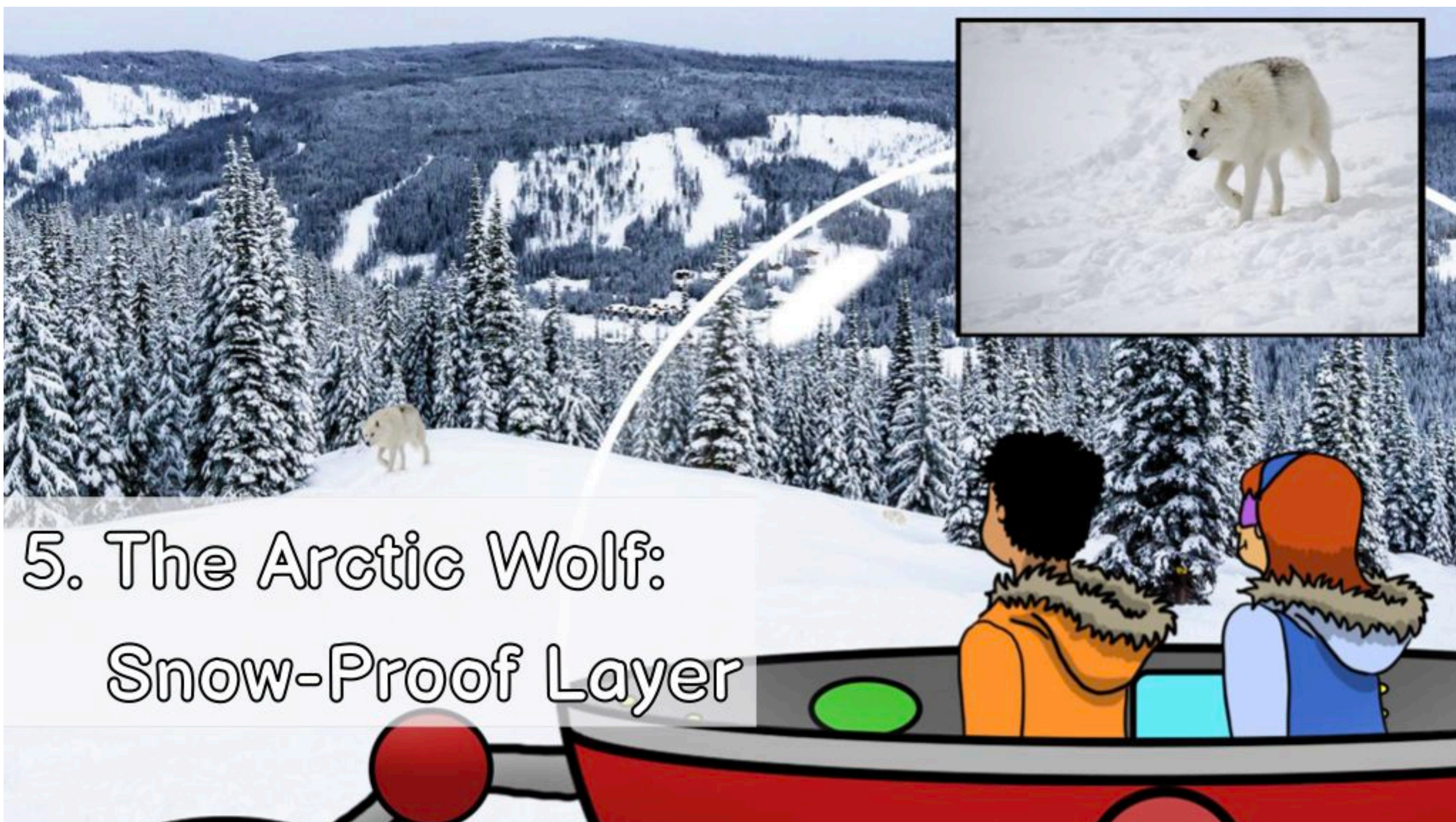
## A White-ish Coat

The Arctic wolf, also named the Polar Wolf or White Wolf, lives in the Arctic tundra of Greenland, Alaska, Iceland, and Canada. Unlike other Arctic animals, the Arctic Wolf does not change its color with the seasons. Another difference is that the Arctic wolf is not entirely white. It has gray patches scattered over its body. They are the same white-ish color all year round and yet the wolf survives.

## Almost the Top Predator

Arctic wolves do not have many enemies because they are near the top of the food chain. That means very few animals will hunt them. However, they will hunt caribou, Arctic hares, Arctic foxes, deer, and musk oxen. In fact, they will eat the entire animal: meat, skin, and even the bones. They only have to watch out for Polar Bears.





## How Else Does the White Fur Help the Ermine?

The ermine's white fur also helps it blend into the snow so it can hunt its **prey** undetected. The ermine is a **carnivore**, or meat-eater. It searches for small prey such as mice, shrews, voles, and lemmings. When small mammals are **scarce**, or hard to find, the ermine will eat insects, birds, and eggs.

When hunting, the ermine stalks its prey, creeping along slowly. When it is time to pounce, the sneaky predator will use quick movements to surprise its prey.



### 3. The Arctic Hare : Changes in Color & Diet



### Fur That Traps Heat

The fur of the Arctic fox is adapted for the coldest of habitats. Each fur strand, or fiber, is empty inside. The hollow fur fiber traps the warm air from the fox's body. As a result, the fox is able to keep a **consistent** warm body temperature.

Fur can also prevent slipping and sliding on the icy surface. The thick fur on the paws of the Arctic fox does just that. It helps them walk on both snow and ice without freezing or slipping.





The **Arctic fox molts**, or sheds, its fur in the autumn. After it sheds the old coat, a new white coat appears for winter camouflage. Similar to other Arctic predators, the white fur allows the Arctic fox to blend in with the snow.

Foxes eat mostly **rodents**, such as lemmings, voles, and other small mammals. In fact, the Arctic fox will even eat an animal that is already dead. They will also snack on insects, eggs, and berries hidden in the snow. With their keen senses, they can detect an animal that is burrowing under the snow.



### **Changing from Grayish Brown to White**

The **Arctic hare** is the largest hare in North America. In the summer, it has grayish brown fur and **characteristic** black tips in both ears. Like the ermine, its fur changes to all-white fur for the winter months. However, their **distinctive** ears with black tips remain the same color in all seasons.

Similar to the ermine, its white fur helps it camouflage or hide from predators. The Arctic hare has a lot of enemies in the wild. They include Arctic fox, Red fox, wolf, Mountain lion, snowy owl, and even the ermine.





## Changing Food

In the warmer seasons, food is **abundant**. The Arctic hare can choose to eat buds, crowberries, dwarf willows, leaves, roots, and bark. Unlike in the nice weather, food is **scarce**, or difficult to find, during the winter months. The winter diet of the Arctic hare is very different from the other three seasons. In winter, the Arctic hare must dig through the snow to find woody plants or moss. This takes time and it is risky to be out in the open because a predator could be lurking nearby. Luckily, their white fur blends into the white snow, giving the Arctic hare enough time to safely dig out its food. In all seasons, the Arctic hare is an herbivore and only eats parts of plants and trees.

