

Winter Scavenger Hunt

Coniferous Branch with Cones



Many animals store or cache food to survive the long days of winter. Branches with cones on the ground is a sign of squirrels.

Look for tiny branches on the ground from coniferous trees. Caching and storing food ensures squirrels will have energy to survive winter.

Wind Swept Trees



Krumholtz refers to bent, twisted and crooked trees shaped by continuous wind. Often associated with coniferous trees.

The needle like leaves of coniferous trees are waxy on the outside protecting them from drying out from the wind and cold.

Herbivore Scat



Animals who only eat vegetation, produce scat or poop that looks like pellets. Pellets come in a variety of sizes & shapes.

Some animals such as the Snowshoe Hare, may eat their scat, especially if it is green, as there is still food energy to get from it!

Sign of an Insect Winter Home



Most adult insects die during winter BUT their eggs or larvae often overwinter in or under bark of trees.

Many insects reduce their water content and build up glycerol which acts as an antifreeze. This helps them to adapt to the long cold winters.

Bearberry



Plants like Bear-Berry grow low to the ground to avoid wind and the cold. Snow covers the plant also insulating it from cold.

Bearberry leaves are waxy protecting them from moisture loss.

Animal Track (Snowshoe Hare)



Animal tracks come in different sizes, shapes and patterns. How many different tracks can you find?

Snowshoe Hares have large feet compared to their mass. This allows them to travel on top of snow reducing the amount of energy they use.

Carnivore Scat



What goes in must go out! Look for tubular scat, a sign of all animals who eat meat as part of their diet.

Look for hair and other signs in scat to show what it was eating. All animals need enough food to meet their energy requirements to survive.

Bird



Not all birds migrate for the winter. Approximately 140 species adapt to the cold and stay year round in Alberta.

Chickadees stash food in many hiding places to provide energy during the winter. They also fluff up their feathers trapping air to keep them warm.

Snow Crystals



Hoar frost forms during cold, clear nights on vegetation or the snow surface. Crystals often look feathery.

While ice crystals form on the outside of plants, inside the branch water concentration is lowered during winter creating a natural antifreeze.

Winter Scavenger Hunt

Camouflaged Animal



The Short-tailed Weasel turns white in winter to match the snowy environment; an adaptation known as camouflage.

Camouflage helps animals to hide from their predators reducing the amount of time and energy running to avoid them.

Deer



Deer (*Cervidae*) are a family of antlered, hoofed animals including White-tailed deer, Mule deer, Elk, Caribou and Moose.

Hollow hair, traps air and insulates deer from the cold. Large body surface areas compared to mass helps reduce heat loss through radiation.

Lichen



There are many types of lichen, including two types of Witches Hair Lichen pictured here. Can you find both colours?

Lichen survive winter by drying out and becoming dormant. Once snow melts, the water activates their cells and they become active again.

Browse - a Herbivore Kitchen



Browse refers to where a plant has been eaten. It may look ragged (e.g. deer) or a clean cut (e.g. snowshoe hare).

Animals that stay and cope for winter must find enough food (energy) to survive. Moose can eat from 15-20 kg of twigs per day in the winter!

White Spruce Tree



White Spruce Trees (*Picea glauca*) have short needles that grow singly. Branches feel prickly and needles have edges.

Branches of Spruce Trees are angled downwards allowing snow to fall. This protects branches from snapping during heavy snowfalls.

Lodgepole Pine Tree



Lodgepole Pine trees (*Pinus contorta*) have long needles that grow in pairs. Look closely!

The needle like leaves of coniferous trees are able to photosynthesize year round when conditions permit producing energy for the tree.

Tree Well



This is the space around a tree, under its branches that does not get the same amount of snow as outside it.

Tree wells can be deep & dangerous for people who may fall into them. Some animals use them to protect themselves from wind and predators.

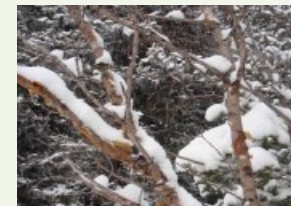
Tree Bud



Deciduous trees form buds where next years leaves will emerge. Look for swollen buds on tips of branches.

Buds are protected with scales that overlap, covering the inner tissues and protecting them from the cold.

Deciduous Shrub or Tree



How many different deciduous trees can you find?

Deciduous trees and shrubs conserve energy during winter by dropping their leaves in the fall.