



Science Unit: *Weather and Seasons*

Lesson 2: *Mt. Seymour Winter Fieldtrip*

School Year: 2009/2010

Developed for: Sir Guy Carleton and Sir Sandford Fleming Elementary Schools, Vancouver School District

Developed by: Catriona Gordon (scientist), Karin Bernauer, Maria Maragos, Anita Bramhoff and Ken Kilback (teachers)

Grade level: Presented to grades K and 1/2; appropriate for grades K – 7 with age appropriate modifications

Duration of lesson: 5 hours including travel time

This field trip was booked through Mt Seymour School Group Tours

Outdoor Education Registrar

Mount Seymour Resorts Ltd

Tel:604 986 2261 Ext 215

Fax:604 986 2267

<http://www.mountseymour.com/groups-schools>

Objectives

1. Discover a local mountain ecosystem during winter.
2. Experience First Nations/Inuit snowshoes and snow goggles.
3. Learn about mountain flora and fauna, and their winter adaptations.

Background Information

During winter, Vancouver's local mountains provide an excellent opportunity for urban children to experience an alpine environment and learn about plant and animal adaptations to the winter season. Animals living in an alpine environment have many adaptations to survive the long, cold winter: Bears build up a layer of fat in the fall, grow thicker coats, build snow caves and hibernate during the winter. The weasel and snowshoe hare change colour and become camouflaged with the snow. The snowshoe hare also has fur on the soles of its feet to keep them from freezing. Some birds in the alpine region grow thicker feathers to ward off the cold. Snow fleas, a species of springtail, actually make an antifreeze which keeps them alive in subzero temperatures. Plants also have adaptations to survive during winter months. Deciduous plants lose their leaves and become dormant during winter while conifers such as the Mountain Hemlock and Amabilis Fir have strongly angled branches sloping toward the ground. This aids in shedding snow and prevents the breaking of branches.

Vocabulary

Snow: Snow is a form of precipitation, which is frozen crystals of rain

Snowshoes: Traditional footwear for distributing one's weight over a large surface to prevent sinking into snow. Inuit and First Nations snowshoes were traditionally made from hardwood and rawhide lacings..

Snow Goggles: Traditional Inuit and First Nations eyewear to prevent snow blindness. These goggles were carved of bone, shell or wood.



SCIENTIST IN RESIDENCE PROGRAM

- Hypothermia:** Due to exposure to cold temperatures, it is a condition when a person's body temperature drops below normal and can be very dangerous.
- Conifer:** Cone-bearing plants, usually trees, such as cedar, fir, hemlock.
- Hibernation:** State of deep sleep of animals for the winter, during cold weather when there is very little to eat.
- Dormancy:** A period of inactivity in an organism's lifecycle, winter dormancy is seen in some plants and animals due to lack of light, heat and available food.
- Camouflage:** Making something normally visible, disguised to match its surroundings. An animal which blends in with its environment may escape from its predators.

Materials

- Snow goggles (made in class)
- Packed lunch
- First Aid Kit
- Extra warm clothes
- Camera
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Before the Field Trip

Introductory Discussion

1. Complete Lesson 1, including making snow goggles
2. Prepare parents and children for the trip with a list of clothing necessary (mitts, toque, snowboots, warm socks, snowpants, jacket, scarf, extra socks and mitts carried in a plastic bag in backpack
3. Go over safety rules, staying with group, instructions about what to do if lost, etc.
4. Ensure enough adult volunteers to have a 5:1 ratio of students to adults.

Science Activity

Mt Seymour Outdoor Education program has age-appropriate guided snowshoe tours. Book well in advance, and arrive half an hour before tour start time.

Check website or phone for latest weather report: <http://www.mountseymour.com/today>

Students will don snowshoes and go on a small, guided tour with Mt Seymour staff. They will learn about animal and plant adaptations to winter in an alpine environment. After the tour, students can try on their snow goggles and if it is a sunny day, they will notice the glare from the snow. This glare is much reduced by using snow goggles.