



WAY COOL RACCOON SCHOOL

This one and a half hour program is delivered on site at Swan Lake Christmas Hill Nature Sanctuary.

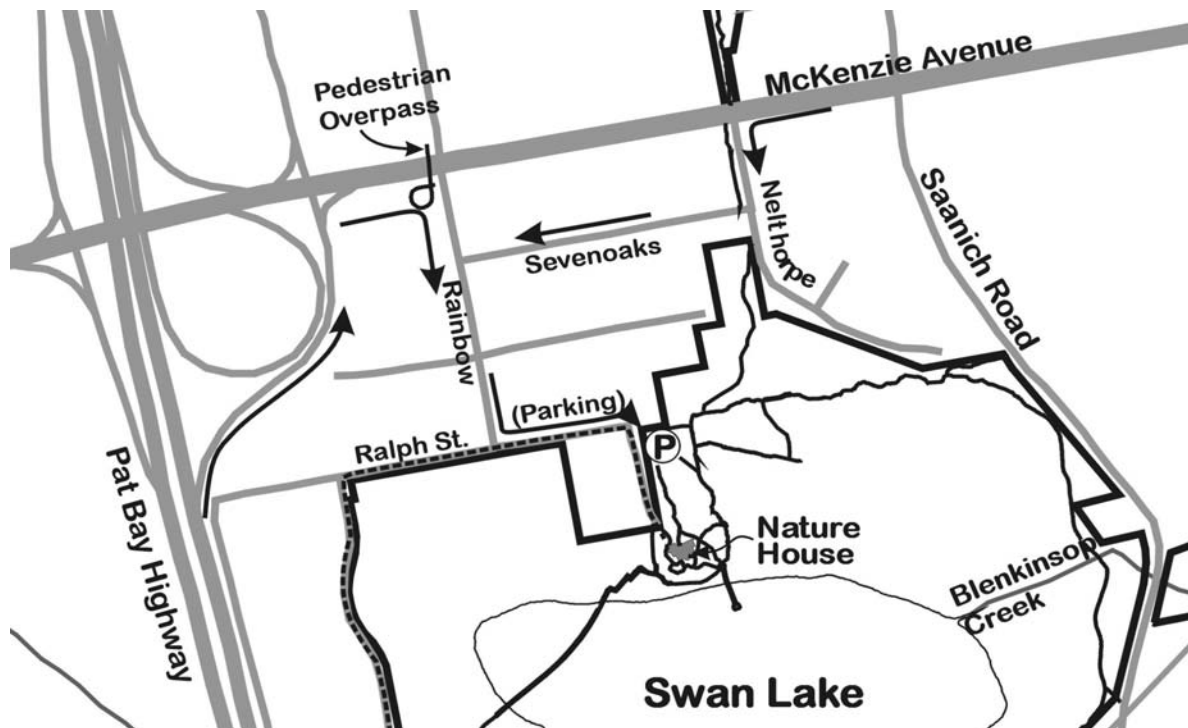
BEFORE YOU ARRIVE

1. Provide each student with easily read **name tags** for both indoors and outdoors.
2. Please encourage appropriate **clothing** for the weather. Remember that part of the program is outdoors.
3. Divide your class into **two groups** before you arrive. It is very helpful if you have another adult to go along with one group, so that they can manage any problems that may arise such as taking a student to the washroom.

The program consists of the following activities:

Inside	Welcome and Puppet Show (whole class)	(30 minutes)
Outside	Den, Climbing, Walking, Tracks, Scat, Freezing, Raccoon trails, Feeling for food (in groups)	(30 minutes)
Inside	Raccoon mount and skull (in groups)	(30 minutes)
	Free time	

WE'LL MEET YOU IN FRONT OF THE NATURE HOUSE.



SCIENCE INTEGRATED RESOURCE PACKAGE

IRP OVERVIEW or Life Science

Life Science is the study of the diversity, continuity, interactions, and balance among organisms and their environments. By using the skills, processes, and attitudes of science, students extend their understanding of the living world and their place within it.

Our program will contribute to the following IRP Learning Outcomes

Grade 1:

- *Communicate their observations, experiences, and thinking
- *Classify living and non-living things
- *Describe the basic needs of local plants and animals
- *Describe how the basic needs of plants and animals are met in their environment
- *Describe changes that occur in daily and seasonal cycles and their effects on living things

Grade 2:

- *Use their senses to interpret observations
- *Infer the probable outcome of an event or behavior based on observations
- *Classify familiar animals according to similarities and differences in appearance, behavior, and life cycles
- *Describe some changes that affect animals
- *Describe ways in which animals are important to other living things and the environment

Our Goals

Students will learn that:

- raccoons live in families
- the mother raises the raccoon kits
- raccoon knowledge is based on instincts (“wild ideas”), on lessons taught by the mother and on their innate curiosity and ability to solve problems
- raccoons can live in the city



PROGRAM OVERVIEW

Puppet Show

A raccoon kit sneaks out of its den in the daytime and goes exploring. The kit meets several animals and wants to learn how to do some of their activities. It gets discouraged when it cannot jump like a grasshopper and swim like a duck etc. Mother Raccoon finds her kit, reassures it and tells the kit it's time for Raccoon School. The kit excels at the raccoon activities that Mother teaches and the kit discovers that Raccoon School is Way Cool!

The puppet show was written and developed by Margaret Lidkea, with help from Mary McLean.

Outside Way Cool Raccoon School

Students will pretend to be raccoon kits, learning from their mother raccoon, the Swan Lake leader. They will play **Follow-the-Leader**. The kits will see a raccoon den; pretend to wake up, to climb using their claws, and to crawl along branches. Following footsteps, kits will practice how raccoons walk (instinct) and will learn about their trails. They will **freeze** when danger is around (instinct). Mother raccoon will teach them who the predators are. At a known **Raccoon Message Tree** in the forest, they will smell raccoon "smell messages", see **tracks** and **scat** and leave their own message.

Down by the lake and/or in the Shelter the kits will instinctively feel things with their fingers.

Mother raccoon will teach them what is good to eat. Raccoons have very sensitive fingers that can feel much better than people can with their fingers and much better when they are wet than when they are dry. The kits will learn to feel with their hands while they keep their eyes and ears up to look and listen for danger like owls and dogs. Kits may pretend to swim instinctively with their front legs, in a dog paddle. Raccoon trails can be seen in the grasses near the lake. In the winter, raccoons do not stay outside very long, preferring warm, dry places like people's sheds, crawl spaces or the Nature House. Kits will learn not to put paws in people's garbage cans but to smell first..."Too stinky! No good food!"

Inside: Raccoon Mount and Skull

Inside the Nature House students will be able to observe the physical characteristics of a stuffed **raccoon** and a **raccoon skull**. A discussion will involve the students in determining what makes the animal look like a raccoon, how its **fur** keeps it warm and dry and how its hands and feet are similar to theirs but also how they are different. An examination of the skull and the **teeth** will also stress the similarities and differences to their own skull and teeth.

Free Time

Students will be encouraged to be **curious as raccoons** and explore the Nature House displays using their senses in a sensible way.

Resource information on *Procyon lotor* (Raccoon)

The word **raccoon** comes from an Algonquin word **Aroughcun** which means “he scratches with his hands”. The scientific name *Procyon lotor* means “dog-like animal that washes”. Both of these names refer to the raccoon appearing to wash its food. It is now thought that the raccoons do not wash their food. They instinctively find food with their hands, and like to play with it by feeling it in the water. Their sensitivity to touch is greatly increased when their hands are wet. The sensitivity of their hairless paw pads is about four times more than the sensitivity of our hands. Wetting food and handling it also makes it easier to swallow, like cookies soaked in milk.

Raccoons range across southern Canada throughout the United States and into Central America. Cold temperatures limit their range.

The black **mask** of fur next to white fur on the face and the **4 to 7 dark stripes on the tail** identify these animals as being raccoons. The colour varies from black, to dark gray to reddish brown, depending on the population. Their fur has two layers: the outer one has long **guard hairs** to repel water like a raincoat and keep the raccoon dry, and the inner coat or **under-fur** has short hairs like soft underwear to keep the raccoon warm by trapping air next to the skin.

Like us they have five agile fingers and five toes. Although they don't have opposable thumbs like we do, they do have outer digits that are slightly lower on the edge of the hand than the others to provide extra holding power. The toes are long and flexible and tipped with non-retractable claws that curve inward and are sharp for cutting. The bottoms of the paws or feet are hairless so they can feel for food instinctively.

Raccoons are **omnivorous** eating almost anything edible including fruits, acorns, worms, insects, bird and turtle eggs, frogs, crayfish, fish, small birds and small mammals. Their manual dexterity can manipulate even the most complex food sources like garbage cans, sheds, tents and backpacks. After the food has been squeezed and maybe dunked into water and reduced to a pulp, the raccoon chews it thoroughly with forty sharp teeth. It has a narrow throat and this soaking may help the raccoon to swallow its food. Raccoons have both sharp meat-cutting teeth at the front and plant-grinding molars at the back, reflecting its omnivorous diet.

Major **predators** are the Great Horned Owl, the Barred Owl, eagles and mammals like the cougar, bobcat, coyote, fox or fisher. In urban areas people, cars and dogs take their toll. When cornered, raccoons are fierce, using claws and sharp teeth to defend themselves.

Raccoons usually **den** near water in hollow trees, rock cavities, abandoned animal burrows and of course in the city in any dry space created by people, including crawl spaces, sheds, attics and even chimneys. Although raccoons do not hibernate, they spend much of winter in a den being dormant (sleeping and living off their stored fat).

Raccoons are **nocturnal**, sleeping during the day in a den, under bushes or on branches high in trees. During the night they ramble throughout their territory, a home range of

about 2.5 to 7.5 square kilometers. The males are more territorial than the females. They leave musk scent messages and deposit scat at places where their territory intersects with other territories or where paths cross. If food is abundant territories can become quite small.

Breeding occurs initially when the female raccoons are one year old and the males two. After breeding father raccoon leaves the den. He does not look after the kits at all. Mother raccoon will even hiss and chase him away if he gets too close. One litter is born each year in spring or summer. Litters average about 3 or 4 kits, often more in the city.

Tiny newborn babies, the size of 2 or 3 paper clips, suck warm milk from their mother's nipples. When they are about two months old they are big enough to go outside. Mother raccoon usually moves them to a den that is not as high so the babies will not hurt themselves if they fall. Outside, they explore their world with mother raccoon teaching them. They play "Follow-the-Leader" and copy her. They instinctively know how to do some things like feel their food, freeze, or scoot up into trees but mother raccoon teaches them what is good to eat, how to get it, what animals are dangerous and where they can go safely. A raccoon that does not obey usually does not survive.

Kits are weaned by 10 to 12 weeks, but stay with their mother all summer, fall and winter until they are about 10 months old. Raccoons can live about 6 years in the wild but about 10 to 14 years in captivity.

RACCOON FACTS www.dcn.davis.ca.us/vme/DrSue/raccoon.htm

Biggest: Generally raccoons are about 10 to 20 Kilograms, although ones in the southern U.S. are smaller. Males are bigger than females and their weight fluctuates with levels of stored fat. The biggest male weighed 28 Kg.

Oldest: One captive raccoon lived to be at least 21 years old; some wild ones may be 13 to 16 years old.

Most in one place: Usually raccoons are solitary, or a few share a den, but a Minnesota trapper entering an old cabin in the winter found 23 pairs of eyes staring back at him.

Relatives: Lesser panda of Asia, ringtails of North America, coatis and coatimundis of the Americas, mountain coati of South America, kinkajou of Central America and olingos of Central and South America.

LIVING WITH RACCOONS IN THE CITY

Raccoons are **native animals**, living here before people. They have become one of the most successful **urban** animals because of their **adaptability and intelligence**. Mostly

they do not cause a problem. If we remember to share our natural community and eliminate or reduce areas of conflict we can **live in harmony** with this wild creature. Raccoon problems are those concerned with food, shelter, pets and disease.

Food

Prevent problems by **preventing access** to pet food, bird food and the garbage can. If raccoons are eating your crops, the problem is more difficult. Farmers, to successfully keep raccoons out of their crops like sweet corn or apples, use electric fences that do not hurt the raccoon.

Shelter

Raccoons love comfort and often find dens in houses, sheds, crawl spaces, attics and even chimneys. The S.P.C.A. recommends **making areas unattractive** to raccoons without hurting them. Put a **bright portable light** inside the area, or a **transistor radio** playing talk shows to make the raccoon think that there are people around. **Motion detectors**, although expensive, are also effective. The S.P.C.A. does not live-trap raccoons to re-locate them because it has been proven that raccoons do not do well when re-located and also disease can be spread. Once a raccoon has moved into your house it may be difficult to chase out. If you do chase out the animal and then seal it, the animal may return and force its way back in, sometimes doing even more damage, although sealing does sometimes work.

Pets

If a raccoon attacks your cat, chances are the cat attacked the raccoon. Being bigger and more experienced than a house cat, the raccoon won. **Keep you pets indoors** particularly at night. **Vaccinate** them regularly.

Disease

Rabies is a disease that raccoons can carry. Locally it is uncommon. The S.P.C.A. has not heard of any bites to humans in Victoria. The **roundworm, *Baylisascaris***, found in many raccoons around Victoria, is transferred from mother to kits, and to other raccoons through fecal matter. Raccoons are natural hosts to this worm, so it remains in their intestines creating eggs that pass out with the feces. If other mammals ingest many eggs from feces, the larvae, not being in their regular host, move through tissue to areas like the brain. Although the S.P.C.A. has not heard of any person getting this in BC, it can be fatal in humans and other mammals. They take careful precautions at Wild Animal Rehabilitation Centers like Victoria's Wild Arc, to avoid getting it. The three diseases that do seem to be transferred from raccoons to pets or animals other than human are **canine distemper, parvovirus, and feline panleukopenia**. Pets that have been vaccinated regularly will not get these diseases from raccoons.

Injured or Orphaned Raccoons

If you find an injured or orphaned raccoon, please leave it alone and **phone the S.P.C.A. at 388-7722 or Wild Arc 478-9453**. **Do not attempt to touch it or pick it up**. Some injuries will heal by themselves. Males defending their territories against other males often inflict considerable damage, even biting off the tails of opponents.

Illustrations by
J. Sharkey Thomas
from *A Natural History of Raccoons*



SUGGESTIONS FOR FOLLOW-UP ACTIVITIES

1. Make a mural of raccoons in their habitat. Add other animals in the habitat. Discuss how these animals live together sharing and competing, especially how people impact on the lives of raccoons, and how raccoons impact on the lives of people.
2. Compare the life of a raccoon with the life of a human. Make a mural to show these differences and similarities.
3. Discuss the differences between wild and tame animals. See Project Wild's activities like "What's Wild?" Compare the lives of pets with that of a raccoon.
4. Discuss other wild animals in the city. Compare the lives of other wild animals to that of a raccoon...e.g. squirrel
5. Do a project defining mammals and determine as many other mammals as possible.
6. Make raccoon masks and tails. Role-play.
7. Make raccoon puppets out of paper bags or socks. Create a story using the puppets.
8. Draw or write a story about a personal (or pretend) real life experience with a raccoon. Share with classmates.
9. Do a computer drawing of a raccoon, labeling characteristics.
10. Make a booklet about what students learned.
11. Read books or watch videos about raccoons.
12. Make a mural, drawings or Thank-you cards/booklet to send to Swan Lake to go on display at the Nature House.

Payment

In invoice will accompany the confirmation letter you received. **Payment** is due at the time of the program, and cheques should be made out to **Swan Lake Nature Sanctuary** and given to the programmer. **VISA or MC** can be phoned in.

Receipts will be sent by e-mail or fax upon request.

Change of Dates and/or Times:

If you wish to change the date or time of your program please contact us at **250.479.0211** or at programs@swanlake.bc.ca. We will do our best to accommodate your request, depending on available times and dates.

If you have any questions or comments about your program please don't hesitate to contact us; we always welcome your feedback.

We greatly appreciate students' feedback. If you send us artwork or writing describing their experience at Swan Lake we will display as many as we can around the Nature House.

