

# Snow Fleas

**AN2.3 Curriculum Links** Animal Growth and Changes (grade 2)

**Outcomes:** Students will identify what snow fleas are, and where to find them.

**Materials:** Information sheet for the teacher: Facts on snow fleas (included)  
Pictures of snow fleas taken from the internet (included)  
For activity 1: Paper, felt markers, colored crayons, and artistic talent!  
For activity 2: Warm clothes, a warm or humid winter day.

**Explore:** Ask the students if they have ever heard of snow fleas. Explain that they really are such creatures. Get them to try and guess what they might look like. Do they think they are big? Small? What color could they be?

**Activity:** 1) Have the students do a drawing of what they think a snow flea could look like. They can be imaginative, and creative in the drawings.

When they are done their drawings, give them a short lesson on what snow fleas do, and where to find them. Show them real pictures of Snow Fleas and bring their attention to how small they really are. You can get the students to compare their drawings to the pictures of the real thing. Is there any difference in the characteristics of the snow fleas in the drawings and the characteristics of the snow fleas in real life? Did they have a different idea of what snow fleas were before the lesson?

Next to reinforce the lesson you can get the students to repeat the following rhyme after you.



(to the tune of "Mary Had a Little Lamb ")

Mary had a little lamb,  
Little lamb, little lamb.  
Mary had a little lamb  
With fleas as white as snow.

And everywhere that Mary went,  
Mary went, Mary went,  
Everywhere that Mary went,  
Those fleas were sure to go.

They followed her to school one day,  
School one day, school one day.  
They followed her to school one day  
In time for show and tell.

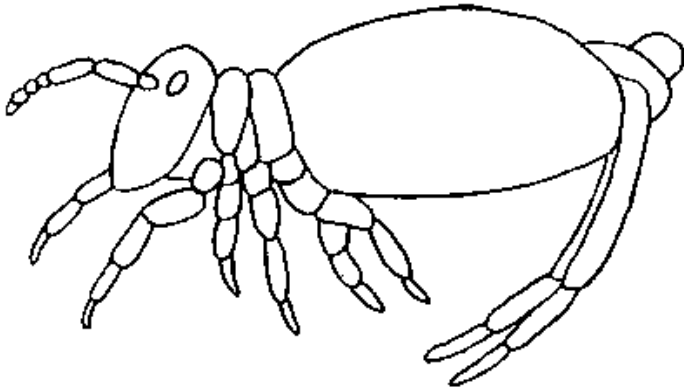
They made the children scratch away,  
Scratch away, scratch away.  
They made the children scratch away,  
And Mary got expelled.

2) If weather permits, go out with the students to find snow fleas. They are more likely to be seen on a mild, humid winter days. One of the best spots to find them is near the base of a tree that is covered with snow.

You can organize the activity in different ways. For example, you can go with the class as a group to “hunt” for snow fleas, or divide the class in smaller groups (accompanied with an adult supervisor) and let them look for the snow fleas with a small reward for the first group to find them. From the lesson, they should be able to guess the most likely place to find them.

**Closure:** At the end of the activity, the students should have gained knowledge on the snow fleas. They should be able to form a general idea about what they look like, where they live. Tell them that their homework assignment is to go home and tell their parents about snow fleas. Perhaps they could convince their parents to go out and look for them together. Ask them when they return to class what the reaction was.

**Snow Fleas Pictures**



## **Facts on Snow Fleas (Teacher Reference Page)**

Snow fleas are small insects that reach the length of 2 to 6 mm (1/16 inch to 1/4 inch) when fully developed. Although they are for the most part dark in color, some species have been found to be of a blue, orange, gold, brown, or green color. They are part of a family called springtails, as they have a stiff appendage called a furcula that they clip to their underside like a spring catch. When released, this “spring” can project them in the air to a height of 30 cm (~12 inches). These wingless insects jump so quickly when they are disturbed that it might seem as though they have disappeared.

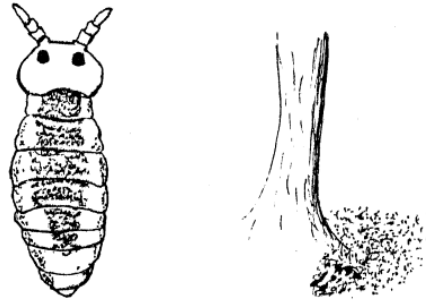
These fleas, even though they prefer colder weather, can be found through the year. They like wet surroundings, and make their home in the soil. They are harder to observe during the warmer months, as they live under the ground, coming out only when they need to go feed.

Snow fleas do not bite to feed, unlike most common fleas. The snow fleas feed on bacterias, fungi, algae, and mold which can be found on decaying leaf matter.

They are generally found in large groups on the snow. It has been described that from far away, seeing a group of snow fleas looks as though someone sprinkled pepper or ashes on the snow. The snow fleas have been found swimming on ponds, on sheets of ice, and even on icicles.

Mating for the snow fleas begins in the late winter, or in the early spring months. The females deposit their eggs into the soil, and they hatch during the spring. The nymphs feed through the summer and reach their adult size for the winter.

Researchers from Queen’s University have been able to isolate a special anti-freeze protein from the minuscule insects. This protein is now being researched to be used as a way to prolong the transplantation period for organ transplants.



A Snow Flea Colony:

