

CHALLENGE! (40 min.)

How Many Muskrats Can Stay?

You'll need: Poker chips, token or items to serve as “food” (about 4 or 5 per student), a space large enough for students to run around. You’ll also need a couple of sashes or vests, to indicate “trappers” in later rounds of the activity.

Set Up: Spread the “food” tokens around the playing area and line students up on one end of the playing aarea.

Explanation:

- Explain to the class that they will be becoming muskrats. After seeing the Virtual Lesson, they should know that muskrats live in “lodges” and that they swim around to feed upon mostly aquatic vegetation.
- Explain that it is time for the muskrats to all go out and feed. They will have 30 seconds to go out and get a piece of food and to return to the lodge (they may only get a maximum of one or two pieces of food).
- Have students go out for the first round and gather food, then return to the lodge to eat. Once the first round of food is collected, have the students discard their first pieces and explain that they will go out to get more. Then begin a second round with the same rules. After 30 seconds, all muskrats must be back to the lodge. In this round, some may not have gotten food. If any individuals didn’t get a piece of food explain that they did not survive the year and they must sit out (but don’t worry, there is another phase to this game).
- Continue these 30 seconds rounds with students only allowed to get one or two pieces of food until eventually all muskrats cannot eat and they are all out. Make note with the class how many rounds of 30 seconds this game lasted.
- Now, explain that this happened because we had so many muskrats in a small area. In order to avoid overpopulations of muskrats, we will now introduce “Trappers” into the game. Designate one or two students to be the Trappers.
- Explain that in this next phase of the game, Trappers will run around as Muskrats feed and if they touch a muskrat, that muskrat does not survive the round. Other than the trapper, the rounds will function the same as before. Muskrats will go out and get one or two pieces of food and then return to the lodge. Replace all of the food from the first phase of the game into the playing area.
- Reset students and play this time with trappers tagging muskrats out of the game. Keep playing until there are no more muskrats left due to either food running out or the trapper tagging all of the muskrats.
- Make note of how many rounds the game went this time around, how much further the food resources lasted, and how many students were “trapped” by the trapper.
- Debrief with students and discuss their findings/activity results. Ask them why did the first phase of the activity end? What did having so many muskrats eventually do to the food resources? Then, examine what happened with the second phase. Food resources should have lasted longer, and was likely still present, as the trapper trapped muskrats from the area. If the game ended due to the trapper trapping them all, examine what happens when a trapper over harvests in an area.





CHALLENGE! (40 min.)

Eat, Breathe, Survive



You'll need: Two different coloured pieces of paper . One to serve as food, and one as “push ups,” hula hoops to serve as “lodges.” You'll also need a space big enough for students to run around.

Set Up: Set up in a space large enough for the students to run, ie. a gym, multi purpose room or outside. Set up a “lodge” (hula hoop) for every 4 students, a number of pieces of paper (4 per student) representing food spread out in the space. Spread everything out so that students will all have to run a distance to the food. Keep the “push ups” for a second round as students will explore what collecting food is like for the muskrats in the summer and winter.

Explanation:

- Explain to students that today they will be exploring what it is like to be muskrats. After watching the Virtual Lesson on Muskrats, students should recognize that muskrats collect their food via the water. They swim around and gather plant materials to eat in the water, and some to bring with them to their lodge for feeding while there.
- To begin, explain to students that they will each begin in groups of 3 or 4, standing in a “lodge” (hula hoop) which serves as their home. They will have a short amount of time to go out away from their lodge into the “water” to collect food and to feed. In summer, muskrats can swim for as long as they like, and they can eat while doing so as they can freely breach the surface to breathe and continue on.
- In order for students to survive the round they must go out and collect food. They must eat two pieces of food during the round while in the “water”, and this can be represented by folding their piece of paper in half and carrying it with them. They must also have one piece of food to bring back to their “lodge” in order to survive and make it the second round.
- The timing of this activity is somewhat dependent upon the size of the space you're using. If you are spread out in a gym, give students one and a half minutes per round. If you are using a larger space such as a field outside you can give students a longer amount of time, such as 2 or 3 minutes. This will vary depending upon the size of space you have and the number of students. They must end the round back at their lodge with at least one piece of food to survive to the next round. Find out which “muskrats” have food with them at the lodge to survive and who did not.
- After this, gather the food and spread it back out into the playing area, but this round you will introduce a “push-up” for each student. These should be away from their lodges, and spread throughout the playing area.
- Explain that now it is winter time. Because the surface of the water is frozen, students will have less time to gather food and must be able to make it to a lodge or a “push-up” quickly in order to eat and to get a breath. In this round, students will have only 30 seconds at a time, and at the end of 30 seconds they must have a piece of food and must make it back to their lodge or be standing on a “push-up” piece of paper. Students who do not make it back to one of these spots to breath will not survive, and students who do not get a piece of food will not survive.
- This winter round should take part over 4 or 5 short rounds. After each 30 second round, students who are not in a lodge or push-up, or who do not have a piece of food to fold/eat, will be eliminated.
- You can debrief with students by discussing the challenges and ingenuity of muskrats that they use to feed, thrive and survive throughout the year. What did they find out happened to food sources closest to the lodges? What happened to food sources with so many muskrats feeding in an area? This activity illustrates both an interesting adaptation of muskrats, and also helps to highlight the importance of managing populations with the use of trapping.



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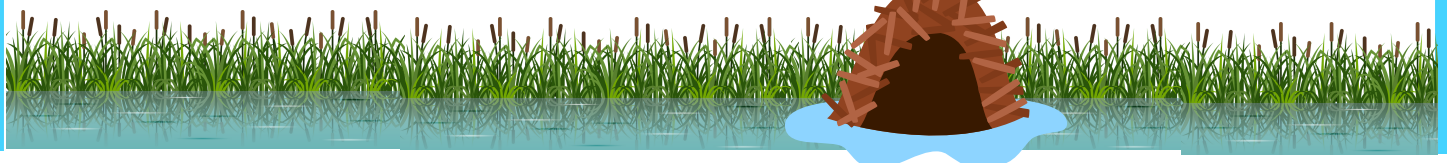
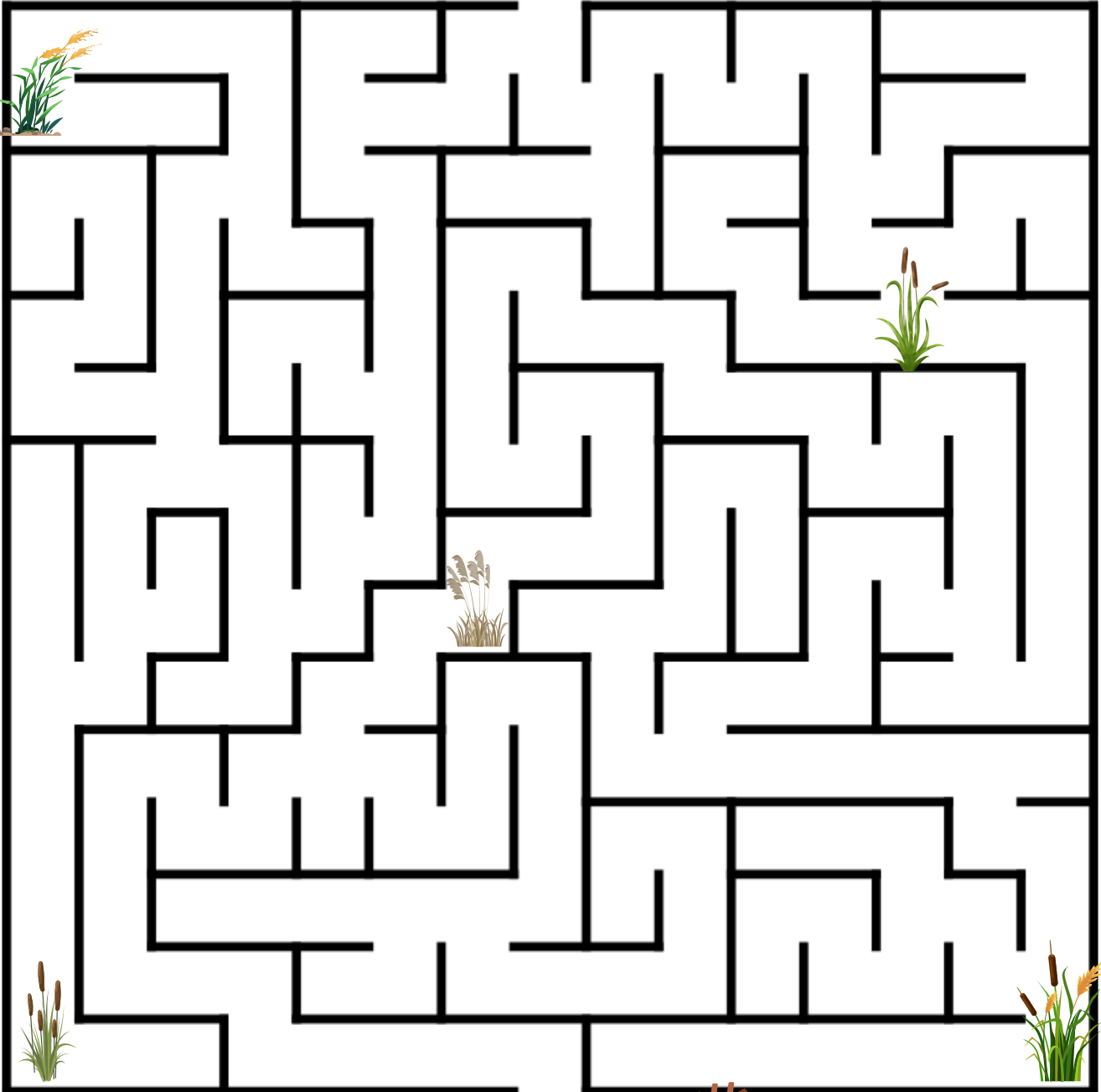
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WHERE'S MY LODGE?



Whether it be summer or winter, muskrats live based out of their lodges. This muskrat is lost and away from the lodge. Help them to find their way back to the lodge and see how much food you can find on the way!





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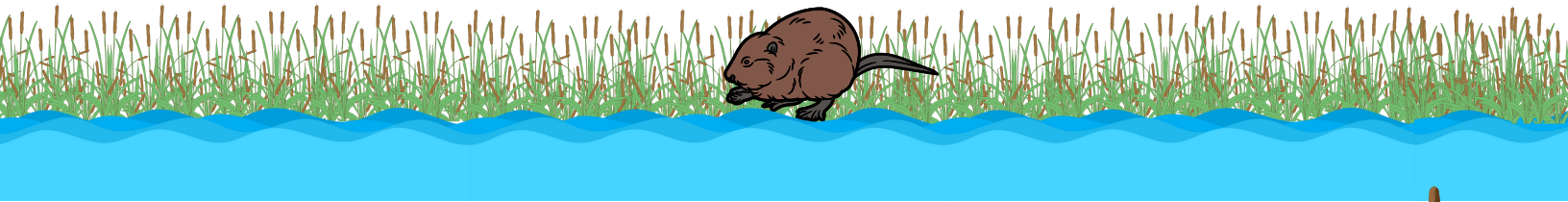
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WHAT SHALL I EAT?

← JK to Grade 3

Now that you've learned a little bit about muskrats, their lives, and diets, take a look at the images below. Circle items below to show us some of the food sources that they are known to eat.



Wild Rice



Pizza



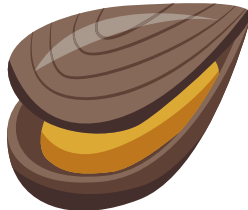
Pond Lilies



Cattails



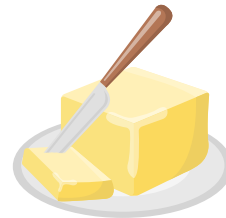
Bulrushes



Mollusks/
Clams



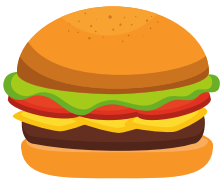
Willows



Butter



Chocolate



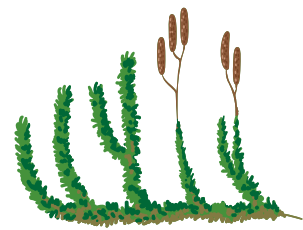
Hamburgers



Fish



Steak



Horsetails





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← Grades 4 to 8

MUSKRAT TRUE OR FALSE

Now that you've watched the Virtual Lesson, read the statements below and determine what is true and what is false about these musky mammals.

1	Muskrats are members of the mustelid family.	t	f
2	Muskrats are one of the only mammals who can breathe while swimming underwater.	t	f
3	Their teeth grow constantly and need to be kept short by chewing on plant materials.	t	f
4	In the winter, muskrats chew holes in the ice and create something we call "pop ups."	t	f
5	Their homes are referred to as lodges, and are made up of plant materials and mud.	t	f
6	Muskrats can hold their breathe underwater for up to 17 minutes.	t	f
7	They live in fast moving, shallow water with limited plant growth.	t	f
8	They can be hunted and trapped across the province.	t	f
9	They have scent glands under the chin which they use to communicate with each other.	t	f
10	Average adults weigh 1kg and measure around 50cm in length.	t	f

