Nature NB Program Kits:

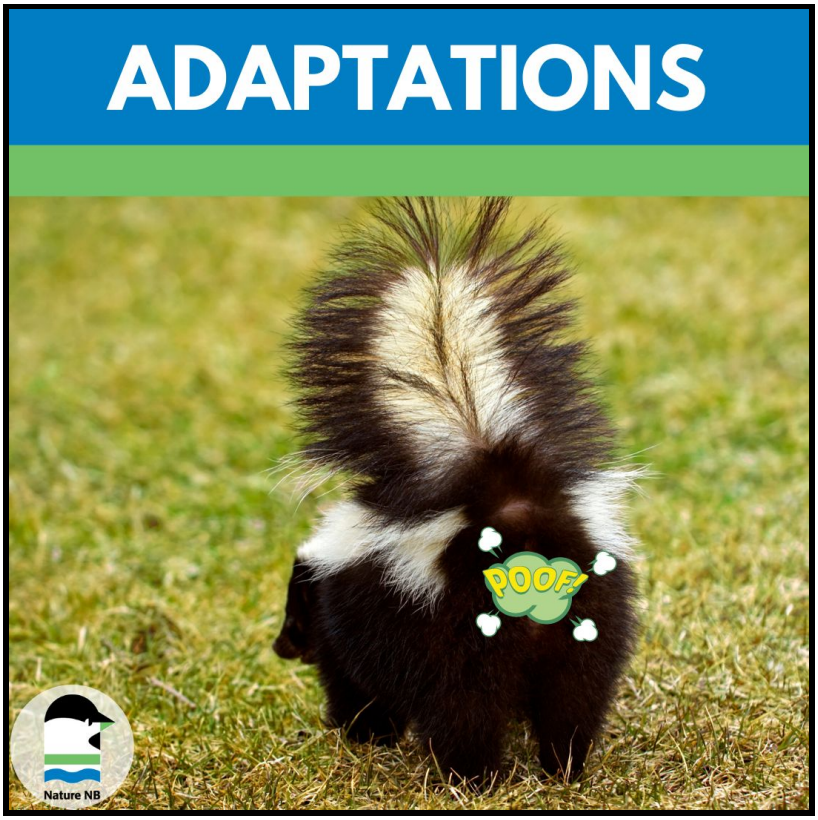

Table of Contents

Introduction

■ The activities in this kit will help you introduce the concept of adaptation to your classroom.
■ The kit is written primarily for New Brunswick educators. The information and activities in this kit are tailored to grades 2 - 5 , with specific New Brunswick curriculum links listed for each activity.
■ The activities in this kit are organized to be held in succession, inspired by Joseph Cornell's Flow Learning Model[1].

- ➔ A game to rid some energy
- ➔ An activity using physical senses
- ➔ A direct experience with nature to awaken love/ importance
- ➔ A quiet, focused reflection activity.

With that said, each activity works as a stand alone, so feel free to pick and choose the activities that fit best with your classroom.

Program Curriculum Links

Sourced from the Government of New Brunswick Department of Education and Early Childhood Development Curriculum Development, Anglophone Sector.

Science

Grade 4

- ➔ **204-3** predict the structural and/or behavioural adaptations needed for an animal to live in a particular habitat, either real or imagined
- ➔ **205-1** carry out procedures to ensure a fair test that explores how appearance affects visibility
- ➔ **300-1** Compare the external features and behavioural patterns of animals that help them thrive in different kinds of places
- ➔ **302-2** Describe how various animals are able to meet their basic needs in their habitat
- ➔ **302-3** Classify organisms according to their role in a food chain

Visual Arts

Kindergarten – Grade 2

[1] Flow Learning Model:Step 1: Awaken Enthusiasm Step 2: Focus Attention Step 3: Direct Experience Step 4: Share Inspiration

- ➔ ***K-2.2.1*** *explore the elements (colour, shape, line, value, space, form, and texture) and the principles of design with emphasis on pattern and repetition in the visual environment*
- ➔ *Recognize and discriminate among the art elements (colour, line, texture, shape) in their art work, the work of artists, in nature and other objects in their total environment. (Curriculum outcomes K-8, 1995)*

Language Arts

Kindergarten – Grade 3

- ➔ **8.** Students will be expected to use writing and other forms of representation to explore, clarify, and reflect on their thoughts, feelings, experiences, and learnings; and to use their imaginations.

Background Information

- Animal Adaptations PowerPoint presentation

Activity 1: Adaptations Relay Race

Materials: Adaptations PowerPoint presentation, Adaptations Relay Race Game
Location: Classroom for presentation, field/ gymnasium for relay race
Time Required: 45 minutes - 1 hour

Activity Description:

Explain to your class: “Today we will be talking about animal adaptations, can anyone tell me what they think that means?” Discuss what the word “adaptation” means with the class before starting the PowerPoint presentation.

After the presentation, rid some energy with a relay race!

Print one copy of Nature NB’s Adaptations Relay Race Game beforehand and designate a “start line” for the relay. Tell the class that they will be competing in a relay race and that you will be dividing them into two groups. Line the groups up single file along the start line in typical relay race style. Explain that you will be naming an adaptation (ex. hibernation) that will correspond to an animal that lives in NB. Show the class the pictures of the animals and name them together. Then go lay out the pictures of the animals some distance away from the start line. Explain that after you name the adaptation, they will have 10 seconds to discuss which animal the adaptation corresponds to before the two students at the front of the lines run to grab the photo.

There is only one photo of the correct answer, so whichever student grabs it first wins the point for their team. If a student takes the wrong photo, have them put it back before the next round. If both students take the wrong picture, have the next two try again for the same adaptation. At the end of the list of adaptations, the team with the most photos wins!

Activity 2: Eagle Eye

Materials: None
Location: Outside, forest edge/ treed area
Time Required: 30 minutes (can be more or less depending on the number of rounds played)

Activity Description:
Eagle Eye is an elaborate version of hide-and-seek. It is an excellent game to teach children how to be comfortable down in the dirt and how to think about predator and prey movements and adaptations. This game is generally best played in a forested area with some undergrowth.

Instructions:

Before starting the game, make sure all the children understand where the boundaries are. Explain that some children (the Eagle's "prey") will be hiding in the woods. The children must hide so that they are not seen or heard by the Eagle. They must, however, be able to see the Eagle's eyes from their hiding spot, in other words, they must do their best to camouflage into their surroundings.

Delineate a small circle that will be the "eagle's nest". Use whatever material is available (sticks, rocks, pine cones) to create a clear boundary as the edge of the nest.
The "Eagle" (seeker), will stand in the eagle's nest, cover their eyes, and count to 30. At this time, the rest of the children (the prey!) go out and hide. Once done counting, the Eagle will visually scan around to see if they can spot the other children. The Eagle will announce "the Eagle is awake!" to indicate they are done counting. The Eagle can move within the boundaries of the eagle's nest but may not step outside of that boundary at any time.

Any children that are spotted by the Eagle come and sit quietly in the nest. They are not allowed to point to hiding children or tell the Eagle where the other children are hiding. You can have them pretend to be eagle chicks or pretend to be some kind of eagle food, i.e. a rabbit, fish or bird.

The winner is the child who was able to hide the closest to the Eagle without being spotted. The winner has the privilege of being the Eagle during the next round.

Post Activity Discussion:

Consider taking the opportunity after the game to ask the children questions about how animals have to stay hidden to stay alive. What colours blend in well in this landscape? Conversely, were some students easier for the eagle to spot because of what they were wearing (did anyone make this connection while playing the game and take off a bright hat for instance)? What types of animals do you think would be the best at camouflaging in this area?

Activity 3: Adaptation Detectives

Materials: Adaptations worksheet
Location: Schoolyard
Time Required: 30 minutes

Activity Description:

Investigate your schoolyard for evidence of animal adaptations! Look for animals, or evidence of animal activity and describe any relevant adaptations using the worksheet.

Delineate boundaries for the students before sending them off on their own to look for adaptations. Discuss what students might find to give them an idea of what they should be looking for. Examples are: Feathers for flight, a hole in the ground that could be from a burrowing animal, a duck track with webbed feet for swimming, etc. Emphasize that it's not about knowing what exactly an adaptation is for, the point of the activity is to observe animals closely, ask questions, and try to propose an explanation for why an animal looks, or acts the way it does.

After 15 - 20 minutes, call the students back and discuss what adaptations they have observed. Consider making a list of how many physical vs. behavioral adaptations the class listed.

Activity 4: Alien Animals!

Materials: Paper, pencil crayons/ markers, Alien Animals PDF
Location: Classroom
Time Required: 30 minutes

Activity Description:

Now that we've discussed different animal adaptations, have your students create their own animal adapted to life on a different planet! Here are some examples of planets for inspiration. Encourage your students to use their imagination as much as possible. If they'd like to, they can even imagine their own planet/ habitat!

Ask your students to draw their imaginary animal on a piece of paper with as much detail as possible. On the back of the page, ask them to write down the adaptations their animal has for their particular habitat and how those adaptations help them survive.

> *Things to think about…*
>
> *How does your animal move?*
>
> *How does your animal defend itself?*
>
> *How does your animal find food and how does it eat?*
>
> *What senses does your animal use?*
>
> *How does it deal with the climate on your planet?*

Be sure to leave enough time to share all of the alien animals together as a class!

Additional Resources

Here are some more fantastic adaptations resources/ games developed by other organizations:

- Peppered Moths | Natural Selection Game
- Adaptations: Beaks: Test Your Knowledge
- Battle of the Beaks | STEM

Contact Us!

If you've used our program kits we would love to hear from you! Please email programs@naturenb.ca with feedback on your experience.

This program kit was developed with generous funding by:

NB Wildlife Trust Fund / Fonds de Fiducie de la Faune du N.-B.

naturehood
A NATURE CANADA INITIATIVE

Nature CANADA

Natural Sciences and Engineering Research Council of Canada
Conseil de recherches en sciences naturelles et en génie du Canada

Canada