

Five-lined Skinks

Life On the Rocks



Photo: Glenda Clayton

Description of Lesson

Five-lined skink is listed as species at risk of special concern. Students participate in a game that examines the reason for the decline of five-lined skinks and discuss actions that can be taken to preserve biodiversity.

Connect with the Georgian Bay Biosphere

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GEORGIAN BAY
BIOSPHERE
MNIDOO GAMII
Spirit of the Water

Georgian Bay Biosphere: Lesson in a Backpack Program

At a Glance

Grade Level: 6

Learning Environment:
Outdoor classroom and any
playing field

Prep Time: 15 minutes

Length of Lesson: 45 Minutes

Key Vocabulary: biodiversity,
species at risk, cover rocks

Staffing: 1 educator /5 students

Materials:

15 hula hoops
Labels on strings—5 house cats,
illegal pet trade, 3 raccoon, and 1
skunk.
Blue pieces of material—one per
student
90 small plastic crickets
10 “Next Generation Cards”

Groupings: Whole class

Teaching/Learning Strategies:
Game

Lesson Outline

TIME	ACTIVITY	LOCATION	MATERIALS
25 minutes	Five-lined Skink Survival	Field	15 hula hoops Labels on strings—5 house cats, illegal pet trade, 3 raccoon, and 1 skunk. Blue pieces of material—one per student 90 small plastic crickets 10 “Next Generation Cards”
10 minutes	Debrief	Classroom	

Curriculum Expectations Grade 6 Science and Technology

Understanding Life Systems: Biodiversity

Overall Expectations

1. assess human impacts on biodiversity, and identify ways of preserving biodiversity;

Relating Science and Technology to Society and the Environment

1.1 1.1 analyse a local issue related to biodiversity (e.g., the effects of human activities on urban biodiversity, flooding of traditional Aboriginal hunting and gathering areas as a result of dam construction), taking different points of view into consideration (e.g., the points of view of members of the local community, business owners, people concerned about the environment, mine owners, local First Nations, Métis, Inuit), propose action that can be taken to preserve biodiversity, and act on the proposal.

Background

Five-lined skinks are Ontario's only lizard. On the shores of the Georgian Bay, cover rocks (flat, relatively thin, mid-sized rocks) are valuable real estate for a skink. These rocks provide shelter from the elements, a refuge from predators, places to find food and lay their eggs.

When they are young, five-lined skinks come equipped with a bright-blue tail that holds the attention of potential predators. If a predator grabs a skink by the tail, the tail will disconnect from the skink's body at weak points along the vertebrate. The tail will flop on the ground, distracting the predator as the skink finds shelter beneath a shrub or rock. As they age, the bright-blue tails become a more drab olive-green.

Five-lined skinks can live for approximately 5 years. Females lay an average of 9 eggs about one month after mating season.

Five-lined skink is listed as Species at Risk of Special Concern. Some reasons for their decline include loss of habitat, illegal collection for the pet trade, and allowing domestic cats and dogs outdoors.



What can you do?

If you see a Five-lined skink or other species at risk, [report your observations!](#) Join the Georgian Bay Biosphere [iNaturalist project](#) to show us your observations of rare, at-risk, or common species! All observations will help us to gather more information about the species on the eastern coast of Georgian Bay in order to better understand threats and where efforts into research and mitigation should be directed. These observations will help guide research questions, mitigation projects, and other conservation initiatives.



Teaching and Learning

Part A. Five-lined Skink Survival

You are Ontario's only lizard. Anyone know the name? (five-lined skink). In this game you are all living on a small island on the Georgian Bay. The boundaries are (point to boundary areas); outside of the boundaries you are in water and not able to survive.

Your objective in this game is to survive the summer season. What do all things need in order to survive? (Habitat – shelter, water, food, air space).

Does anyone know what five-lined skinks use for shelter? (cover rocks – relatively flat, thin rocks). These rocks are represented by the hula hoops. You are safe if you are within the hula hoop, but can only remain in the hula hoop for 10 seconds.

Does anyone know what a five-lined skink might eat? (insects, spiders, worms, snails). Plastic crickets have been placed in the hula hoops around the playing field. You can only take one cricket at from each hula hoop. If you collect 9 plastic crickets you are able to receive an extra life. Once you have collected 9, bring them to your teacher to receive a Next Generation card. Once you have this card, if you are tagged you can give the tagger the card, but remain in the game as the next generation in the next round.

What are natural predators of five-lined skink? (raccoons, skunks, etc.)

Does anyone know the defense mechanism of the five-lined skink? (young have a bright blue tail which attracts predators. If the predator grabs the tail, the five-lined skink is able to detach it and get away). You each have a piece of material that represents this bright, blue tail. The first time that you are caught, you can hand off the tail instead of being eliminated from the game.

1st Summer – Natural predators – one raccoon, one skunk

2nd Summer – Number of raccoons reach a record high. Two additional raccoons added.

3rd Summer – Natural predators – one raccoon, one skunk

4th Summer – Local cottager has five pet cats that she has brought with her to the island. Predators now include one raccoon, one skunk, five cats.

5th Summer – Boaters decide to build inukshuks. All but two of the hula hoops are collected to create an inukshuk (teacher standing holding hula hoops).

Each round keep a tally on a white board of # of skinks that survived.

Debrief after round: Using the whiteboard tallies, look at numbers of skinks that survived each round. Ask: The first round had a relatively normal number of predators. How many survived?

In the second summer, as in nature, raccoons reached a record high. How did this impact the skink population?

4th Summer – How did having an introduced predator, such as the cats in this round, impact the skink population?

5th Summer – How did the loss of the cover rocks, represented by the hula hoops impact the skink population? (Not as much food available, no cover from predators, very hard to survive.)

Part B. Debrief

What can we do protect the five-lined skink?



Credit R Bolton