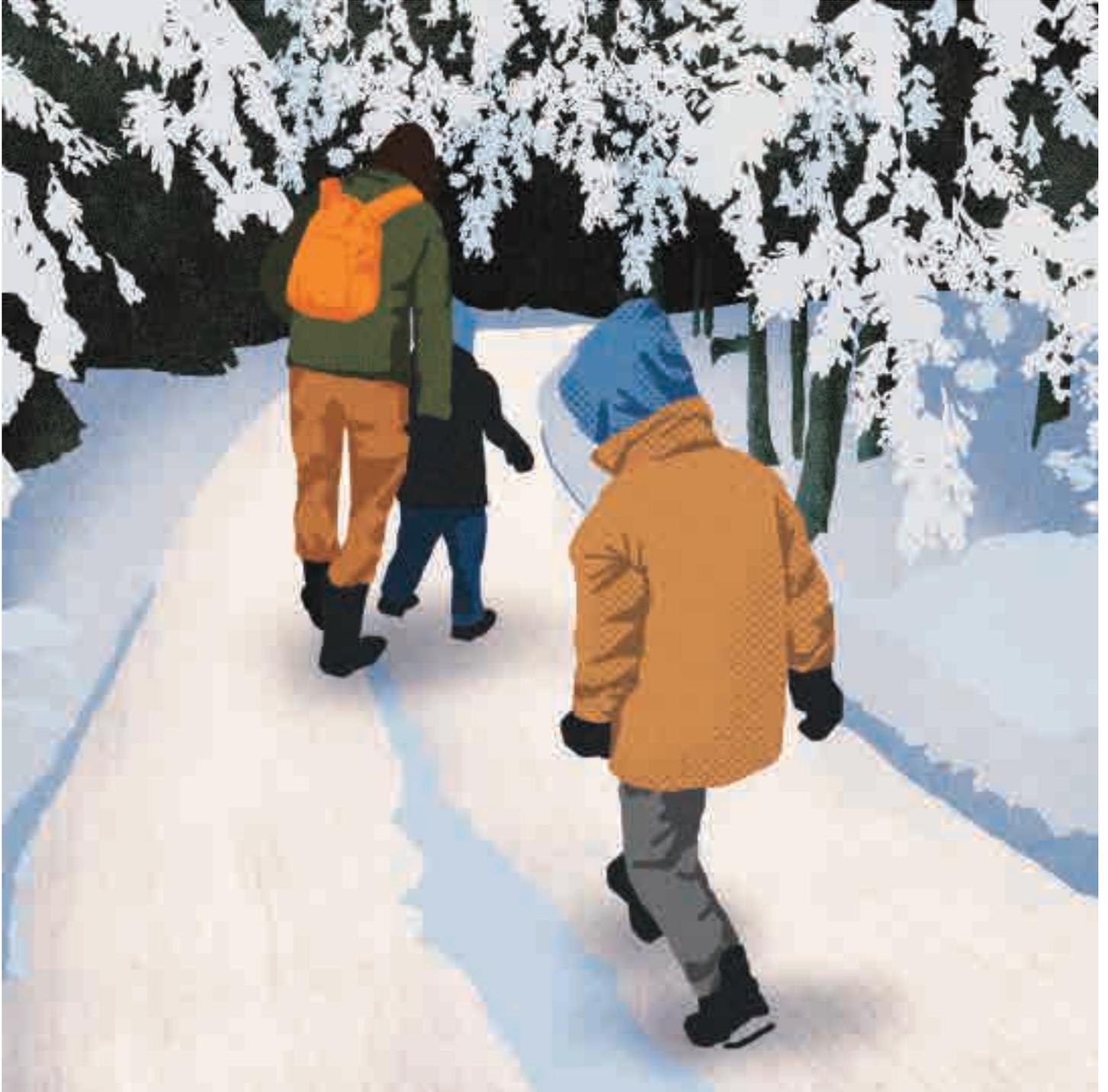


# BIODIVERSITY AROUND US



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## Curriculum Connections

Science (6) B1.1 assess the benefits of biodiversity and the consequences of the diminishing of biodiversity

Science (6) B2.5 describe interrelationships within species, between species, and between species and their natural environment, and explain how these interrelationships sustain biodiversity

Health and Safety (5) 2.1 follow established safety procedures for outdoor activities and field work

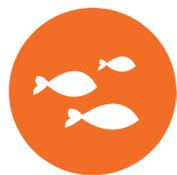


## Learning Goals

Understand the concept of biodiversity and its importance in maintaining healthy ecosystems.

Identify and describe different types of organisms found in their local environment, including plants, animals, and microorganisms.

Recognize and appreciate the interdependence of living organisms within ecosystems.



## Materials

iPad, camera app, paper, pencil crayons, pencil



## Assessment / Evaluation

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Biodiversity around us worksheet

Biodiversity map assessment rubric



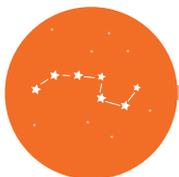
## Accommodations / Modifications

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Use visual aids, such as pictures or diagrams, to support understanding of biodiversity concepts.

Allow students extra time to complete activities or observations, considering individual needs and abilities.

Offer modified versions of worksheets or assignments, adjusting the complexity or length to suit individual abilities.



## Teaching/Learning Strategies

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### Introduction

(minds on/activate prior knowledge)

The lands around us have been looked after by indigenous people since time immemorial.

For First Nations peoples, harvesting from the land holds deep cultural and historical significance. It is a practice rooted in ancient traditions and a profound connection to the natural world. First Nations communities have long relied on the land as a vital source of sustenance, spirituality, and cultural identity. Through their intimate knowledge of the environment, passed down through generations, they have developed sustainable and respectful harvesting practices that prioritize the balance and well-being of both the land and its inhabitants.



## Teaching/Learning Strategies

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Harvesting from the land encompasses various activities, including hunting, fishing, gathering medicinal plants, and cultivating crops. Each activity is imbued with teachings, protocols, and ceremonies that honor the interconnectedness between humans and the natural world. First Nations peoples understand the importance of maintaining the delicate equilibrium of ecosystems, ensuring that the resources they gather are done so in a way that respects the cycles of nature and allows for regeneration.

Furthermore, the act of harvesting from the land goes beyond mere subsistence; it is a means of cultural preservation and community bonding. Elders pass down traditional knowledge and teachings to younger generations, fostering a deep appreciation for the land's gifts and the responsibility to protect and steward it for future generations. Harvesting also serves as a platform for intergenerational learning, storytelling, and the transmission of cultural values.

### New Learning (30 minutes) (give/demonstrate new information)

#### Activity 1

Students are to take part in a guided walk in a local forest/ravine environment. Before heading out we want to give students some areas that they should consider in their observations.

Explain to the students that during the walk they are to use a device (iPad or iPhone) to document the landscape around them.

Walk in the woods/ravine/park - students should observe living and non-living elements of the environment.

Add observe and record both living and non-living elements



## Teaching/Learning Strategies

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During a nature walk to observe biodiversity, here are some observations that a grade 6 student might make:

**Variety of Plants:** Notice the wide range of plants present in the area. Observe different types of trees, flowers, shrubs, and grasses. Take note of their sizes, shapes, and colors.

**Animal Life:** Look out for different types of animals. Observe birds flying or perched on trees, insects crawling on the ground or plants, and small mammals scurrying around. Try to identify some of the species if possible.

**Insect Diversity:** Pay attention to the various insects you come across. Observe butterflies, bees, ants, beetles, and other insects. Notice their different colors, sizes, and patterns.

**Sounds:** Listen to the sounds of nature. Take note of bird songs, chirping insects, rustling leaves, or the sound of water flowing if there is a stream or river nearby.

**Natural Habitats:** Observe different types of habitats within the area. Look for wetlands, forests, meadows, or any other unique ecosystems. Notice how different plants and animals are adapted to their specific habitats.

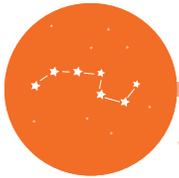
**Interactions:** Observe any interactions between species. Look for animals feeding on plants, birds building nests, or insects pollinating flowers. Try to understand the interconnectedness of different organisms.

**Signs of Life:** Look for signs of animals even if you can't spot them directly. Keep an eye out for tracks, nests, burrows, or droppings that indicate the presence of animals in the area.

**Changes Over Time:** Observe any changes in the environment as you walk. Notice how the vegetation, animal activity, or overall scenery might differ from one area to another.

**Environmental Factors:** Take note of environmental factors that influence biodiversity. Observe sunlight, temperature, humidity, wind, and any other factors that might affect the presence or behavior of organisms.

**Human Impact:** Pay attention to any signs of human impact on the environment.



## Teaching/Learning Strategies

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Guided Practice  
(checking for student understanding)

### Activity 2

Post walk class activity (Teacher led) (15 minutes) with notes on a white board

What examples of species did students observe?

Animals, plants, birds, insects

What signs of life were observed?

How are habitat, food and water contributing factors?

What evidence was observed of an interrelationship between species?

What food sources were observed?

What sounds were heard?

### Reflections

Activity 3 (20 minutes)

Materials (paper, pencil, colouring optional)

Draw a map of a scene from your walk with at least three species. As a class review the success criteria for items to consider in student illustrations. Use pictures taken with the iPad to help recall details from the walk.

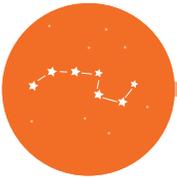
Success criteria for assessing a student's biodiversity map:

#### **Accuracy and Detail:**

The map accurately represents the key features and locations of biodiversity in the area. Different species and habitats are clearly labeled and depicted with attention to detail. The map includes a variety of organisms, representing the diversity present in the local area.

#### **Organization and Clarity:**

The map is well-organized, with a clear layout that allows for easy understanding of the biodiversity elements. Labels, legends, and symbols are used effectively to enhance clarity and facilitate interpretation. The map provides a clear sense of spatial relationships between different biodiversity features.



## Teaching/Learning Strategies

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### **Comprehensiveness:**

The map includes a wide range of biodiversity elements, such as different species, habitats, ecosystems, and ecological interactions.

It demonstrates an understanding of the various factors that contribute to biodiversity, such as plants, animals, microorganisms, and their interdependencies.

### **Representation of Biodiversity:**

The map effectively captures the diversity of species, including both flora and fauna, present in the local area.

It showcases different habitats, ecosystems, and ecological niches, highlighting the variety of environments within the region.

The map represents the abundance or scarcity of certain species or habitats, indicating their relative importance or vulnerability.

### **Creativity and Visual Appeal:**

The map exhibits creativity and originality in its design, incorporating visually engaging elements, such as colors, illustrations, and appropriate symbols.

It demonstrates an aesthetically pleasing presentation that enhances the viewer's interest and engagement with the biodiversity depicted.

## **Application**

(activity to reinforce/demonstrate learning)

Activity 4 (20 minutes)

Student culminating handout based on their observations and map drawing.

**Reflection**  
(what did/didn't work)

**Next Steps**  
(what to teach/re-teach)

A large, empty rectangular area with a light beige background, intended for writing a reflection on what did or didn't work.A large, empty rectangular area with a light beige background, intended for writing next steps or what to teach/re-teach.

Name \_\_\_\_\_

Date \_\_\_\_\_

# BIODIVERSITY AROUND US



Q: From your drawing, describe how one species is dependent on another species

Q: Identify and describe three different animal species you observed during the walk. Include their characteristics and adaptations.

Q: How might changes to one species affect changes to other species?

Q: What are two examples of how local biodiversity may be affected

Q: What human activities can negatively impact biodiversity?  
Provide at least three examples and explain their effects.

Q Give two examples of what can be done to protect local biodiversity