



Go Nature!

You can find a *DIY* [video](#) of this activity by clicking here: [Go Nature!](#)

Recommendations: For students in grades 1-3 and 6. Adult supervision is recommended. An outdoor activity that can include indoor planning and preparation.

Purpose: Students will explore and learn about natural diversity in their backyard or neighborhood

Materials:

- Pencil/Pen
- Paper
- Straight edge
- Measuring device like a ruler
- Marker
- Clipboard
- Clothes for outside

How it Works:

Students will go outside to find nature items to check off on a “BINGO” card. Discussions and questions can be encouraged to link this activity specifically to the curriculum of your student(s) grade. (Curriculum prompts are included on page 3-12)

Step 1: Gather materials

Step 2: Draw a 5x5 “BINGO” grid on your paper

Step 3: Fill in the boxes on your grid with nature items. Use the included list or make your own

Step 4: Go outside and try to find the items in your “Go Nature!” card

Step 5: Engage students with questions and discussion prompts to link your discoveries into the appropriate curriculum

Conclusion:

The items you choose to put in the boxes are up to you, think of what you might find in the area you are going to play the game. As a teacher or parent include items you would like to have

discussions about. Remember this activity is to support curriculum its not intended to teach an entire Science and Technology unit. Have fun!! This activity is all about having fun and sneaking some learning in as you go.

Resources:

Go Nature list of possible items for your game board

Grade 1, 2, 3 and 6 Curriculum questions and prompts as well as overall unit expectations to support this activity.

Links and how to find Ontario Curriculum

Please feel free to email me if you have any questions about this activity:

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Go Nature! List

	Omnivore	Pine Needle
	Tree smaller than you	Animal Scat
Oak Leaf	Animal Track	Bird in flight
Dandelion	Moss	Underwater Animal
Bone	Dead Tree	Migratory Animal
Rock	Arachnid	Black Animal
Seed	Grass taller than your shoe	Bird on ground
Deciduous Tree	Two trees touching	Brown Animal
Maple Leaf	Nut	Carnivore
Animal with no legs	Sap or Pitch	Herbivore
Flying Insect	Fur	Bird in tree
Fuzzy Plant	Feather	Burl
Bud	Animal home	Fungi
Vine	Crawling Insect	Tree taller than your house
Spiderweb	Antler	Fruit Tree
Cattail (plant)	Bark	The colour blue
Cats Tail (proper)	Bedrock	Mineral

SCIENCE

Elementary Science and Technology Curriculum Overview				
	Understanding Life Systems	Understanding Structures and Mechanisms	Understanding Matter and Energy	Understanding Earth and Space Systems
Grade 1	Needs and Characteristics of Living Things	Materials, Objects, and Structures	Energy in Our Lives	Daily and Seasonal Changes
Grade 2	Growth and Changes in Animals	Development	Properties of Liquids and Solids	Air and Water in the Environment
Grade 3	Growth and Changes in Plants	Forces and Stable Structures	Forces Causing Movement	Soils in the Environment
Grade 4	Habitats and Communities	Pulleys and Gears	Light and Sound	Rocks and Minerals
Grade 5	Human Organ Systems	Forces Acting on Structures and Mechanisms	Properties of and Changes in Matter	Conservation of Energy and Resources
Grade 6	Biodiversity	Forces	Electricity and Electrical Devices	Space
Grade 7	Interactions in the Environment	Form and Function	Pure Substances and Mixtures	Heat in the Environment
Grade 8	Cells	Systems in Action	Fluids	Water Systems
Grade 9 and 10 Science Curriculum Overview				
	Biology	Physics	Chemistry	Earth and Space Science
Grade 9 Academic	Sustainable Ecosystems	The Characteristics of Electricity	Atoms, Elements, and Compounds	The Study of the Universe
Grade 9 Applied	Sustainable Ecosystems and Human Activity	Electrical Applications	Exploring Matter	Space Exploration
Grade 10 Academic	Tissues, Organs, and Systems of Living Things	Light and Geometric Optics	Chemical Reactions	Climate Change
Grade 10 Applied	Human Tissues, Organs, and Systems	Light and Applications of Optics	Chemical Reactions and Their Practical Applications	Earth's Dynamic Climate

Grade 1 Science and technology

Understanding Life Systems – Needs and characteristics of living things

Remember you don't have to use all of these questions to be successful! Use the ones that naturally fit in with your students exploration and interests

1. Relating science and technology to society and the environment

- What happens to other animals and plants when part of their environment is not healthy?
- What are some ways that humans help and hurt other living things?
- What are some living things that we see every day?
- Which are plants and which are animals?
- What makes them important to us and to the environment?
- If there were no cows (trees, insects, bats, grass);
- How would things be different for us as humans?
- How would things be different for other living things?
- How would the environment be different?
- What are some things we can do to show that we care for other living things and appreciate what they do for us and for the environment?

2. Developing investigation and communication skills

- What are some of the things that humans need to live and grow?
- What do other living things need to live and grow?
- In what ways are all living things alike?
- What are some ways in which they are different?
- In what ways might humans interfere with the ability of other living things to get what they need to live (e.g., by polluting the water that animals drink and live in; by removing plants from their natural growing places and putting them in their gardens)?
- What are the things that plants need in order to grow and survive?
- What parts do most plants have?
- How does each of these parts help the plant to get what it needs to grow and survive?

If you really want to dig deep this is what students would hopefully be able to do at the end of grade 1 for this section;

3. Understanding basic concepts

- Identify environment as the area in which something or someone exists or lives
- Identify the physical characteristics (e.g., size, shape, colour, common parts) of a variety of plants and animals (e.g., sunflowers are tall, with a long stalk, leaves, and big, round, yellow flowers with hundreds of seeds; dogs can be big or small, come in many shapes and colours, have four legs, and usually have a tail and are covered with fur)
- Describe the characteristics of a healthy environment, including clean air and water and nutritious food, and explain why it is important for all living things to have a healthy environment
- Describe how showing care and respect for all living things helps to maintain a healthy environment (e.g., leaving all living things in their natural environment; feeding birds during cold winter months; helping to plant and care for plants in the gardens that attract birds and butterflies; caring for the school and the schoolyard as an environment)
- Identify what living things provide for other living things (e.g., trees produce the oxygen that other living things breathe; plants such as tomatoes and apple trees and animals such as cows and fish provide food for humans and for other animals; a tree stump provides a home for a chipmunk; porcupines chew off the tips of hemlock limbs, providing food for deer in winter)
- Describe how the things plants and animals use to meet their needs are changed by their use and are returned to the environment in different forms (e.g., the food animals eat and the water they drink are returned to the earth as scat and urine)

Grade 2 Science and technology

Understanding Life Systems – Growth and Changes in Animals

Remember you don't have to use all of these prompts to be successful! They are here to promote discussion and learning that will help students reflect and form personal opinions

1. Relating science and technology to society and the environment

- What are positive and negative impacts that animals have on humans and the environment?
 - *For example, dogs can be trained to be the eyes and ears of visually and hearing impaired people which is great, but when birds destroy crops such as blueberries and apples that affects us (humans) in a bad way.*
- What are some positive and negative impacts that different kinds of human activity have on animals and where they live?
 - *For example, humans try to protect endangered and/or sensitive species by minimizing pollution and protecting the places where they live but unfortunately, humans also use lands where animals live to build houses for themselves.*

2. Developing investigation and communication skills

- Observe and compare the physical characteristics (e.g., fur or feathers; two legs or no legs) and the behavioral characteristics (e.g., predator or prey) of a variety of animals, including insects, using student-generated questions
- Investigate the life cycle of a variety of animals (e.g., butterflies, frogs, chickens) observe and compare changes in the appearance and activity of animals as they go through a complete life cycle (e.g., frog, butterfly)
- Investigate the ways in which a variety of animals adapt to their environment and/or to changes in their environment, using various methods
- Use appropriate science and technology vocabulary, including life cycle, migration, adaptation, body coverings, and classify, in oral and written communication

If you really want to dig deep this is what students would hopefully be able to do at the end of grade 2 for this section;

3. Understanding basic concepts

- Identify and describe major physical characteristics of different types of animals (e.g., insects, mammals, reptiles)
- Describe an adaptation as a characteristic body part, shape, or behavior that helps a plant or animal survive in its environment (e.g., some birds migrate to a warmer climate for the winter; the design of a whale's flipper allows the whale to turn, steer, and balance; the cecropia moth has the pattern of a snake's head on its wings: the hypothesis is that this is to frighten its predators away)

- Identify ways in which animals are helpful to, and ways in which they meet the needs of, living things, including humans, to explain why humans should protect animals and the places where they live (e.g., bats control mosquito populations; birds and wildlife provide pleasurable viewing experiences; the buffalo provided some Aboriginal people with everything they needed to survive: food, shelter, clothing, tools, ornamentation, and weapons; horses can be used for labor; cats and dogs provide companionship for humans; animals, including humans, disperse plant seeds)
- Identify ways in which animals can be harmful to humans (e.g., some people have an allergic reaction to bee and wasp venom when they are stung; deer, moose, and bears on roads can pose a hazard to people driving at night)

Grade 3 Science and technology

Understanding Life Systems – Growth and Changes in Plants

Remember you don't have to use all of these prompts to be successful! They are here to promote discussion and learning that will help students reflect and form personal opinions

1. Relating science and technology to society and the environment

- How are plants important to humans? (Think about different people like builders, farmers, vegetarians, etc)
- How do other living things depend on plants?
- How can humans protect plants
- What are some ways that we (humans) affect plants in good ways or bad ways. For example, we water and put our house plants in a bright window to help them grow, but we also pull plants we don't like (weeds) out of our gardens.
- What happens to a plant if we "pick" a flower or piece of fruit?
- How would it effect plants if you were to build a house in a field or near a wetland?

2. Developing investigation and communication skills

- How do plants meet their need for air, water, light, warmth, and space?
- What are different ways in which we can help plants meet their needs
- How many plant parts can you name, describe and see on different plants?(stem, leaf, root, pistil, stamen, flower, seed)

If you really want to dig deep this is what students would hopefully be able to do at the end of grade 3 for this section;

3. Understanding basic concepts

- Describe the basic needs of plants, including air, water, light, warmth, and space
- Identify the major parts of plants (root, stem, flower, stamen, pistil, leaf, seed, fruit) and describe how each contributes to the plant's survival within the plant's environment (e.g., the roots soak up food and water for the plant; the stem carries water and food to the rest of the plant; the leaves make food for the plant with help from the sun; the flowers grow fruit and seeds for new plants)
- Describe the changes that different plants undergo in their life cycles (e.g., some plants grow from bulbs to flowers, and when the flowers die off the bulb produces little bulbs that will bloom the next year; some plants grow from germination of a seed to the production of a fruit containing seeds that are then scattered by humans, animals, or the wind so that new plants can grow)
- Describe how most plants get energy to live directly from the sun (e.g., plants turn the energy from the sun into food for themselves) and how plants help other living things to get energy from the sun (e.g., Other living things, which cannot "eat" sunshine, eat the plants to get the energy. They also get energy when they eat the animals that eat the plants.)

- Describe ways in which humans from various cultures, including Aboriginal people, use plants for food, shelter, medicine, and clothing (e.g., food – from rice plants; houses for shelter – from the wood of trees; medicines – from herbs; clothing – from cotton plants)
- Describe ways in which plants and animals depend on each other (e.g., plants provide food for energy; animals help disperse pollen and seeds, and provide manure that fertilizes the soil in which plants grow; plants need the carbon dioxide that animals breathe out, and animals need the oxygen that plants release into the air)
- Describe the different ways in which plants are grown for food (e.g., on farms, in orchards, greenhouses, home gardens), and explain the advantages and disadvantages of locally grown and organically produced food, including environmental benefits
- Identify examples of environmental conditions that may threaten plant and animal survival (e.g., extreme heat and cold; floods and/or droughts; changes in habitat because of human activities such as construction, use of gas-powered personal watercraft on lakes)

Grade 6 Science and technology

Understanding Life Systems – Biodiversity

This link is not as strong as the primary ones but can be done with careful consideration to discussion along the way

Remember you don't have to use all of these prompts to be successful! They are here to promote discussion and learning that will help students reflect and form personal opinions

1. Relating science and technology to society and the environment

- What benefits do human societies derive from biodiversity (e.g., thousands of products such as food, clothing, medicine, and building materials come from plants and animals)
- What problems can occur when biodiversity is diminished (e.g., monocultures are more vulnerable to pests and diseases)
 - **Sample issue:** Monoculture systems like some lawns grow best in the soil that is imported or modified to be best for them. But monoculture systems reduce diversity, and so more soil and pest problems result. In turn, people might apply more chemical fertilizers and pesticides, which pollute the land, the water.

2. Developing investigation and communication skills

- Can you think of ways to “classify” or organize the plants and animals found in a specific habitat?
 - What are the criteria you will use to compare organisms?
 - Why are these good criteria to use to compare the organisms?
 - Why is it important to be able to compare organisms in some organized way?
- Do you notice any different characteristics between plants and animals that allow them to live in the same ecosystems or environments?
 - For example; In a shady forest, eastern white cedar trees are “shade tolerant” because of adaptations like auto-pruning their lower branches and growing tall and straight to compete for sunlight at the canopy, American toads have also learned to thrive in this shady environment when choosing a moist and cool habitat.

If you really want to dig deep this is what students would hopefully be able to do at the end of grade 6 for this section;

3. Understanding basic concepts

- Identify and describe the distinguishing characteristics of different groups of plants and animals (e.g., invertebrates have no spinal column; insects have 6 legs; flowering plants produce flowers and fruits), and use these characteristics to further classify various kinds of plants and animals (e.g., invertebrates > arthropods > insects or vertebrates > mammals > primates)
- Demonstrate an understanding of biodiversity as the variety of life on earth, including variety within each species of plant and animal, among species of plants and animals in communities, and among communities and the physical landscapes that support them

- Describe ways in which biodiversity within species is important for maintaining the resilience of those species (e.g., because of genetic differences, not all squirrels are affected equally by infectious diseases such as mange; some species of bacteria have become resistant to antibiotics because resistant individuals have survived and reproduced)
- Describe ways in which biodiversity within and among communities is important for maintaining the resilience of these communities (e.g., having a variety of species of wheat allows for some part of the crop to survive adverse conditions)
- Describe interrelationships within species (e.g., wolves travel in packs to defend their territory, raise their cubs, and hunt large prey), between species (e.g., the brightly-coloured anemone fish protects its eggs by laying them among the poisonous tentacles of the sea anemone, and in return the fish's bright colours attract prey for the anemone to eat; birds and bees take sustenance from plants and carry pollen between plants), and between species and their environment (e.g., algae and water lilies compete for sunlight in a pond), and explain how these interrelationships sustain biodiversity
- Identify everyday products that come from a diversity of organisms (e.g., traditional pain relievers are derived from the bark of the white willow tree; tofu is made from soybeans; silk is made from silkworm cocoons; nutritional supplements, shampoos, toothpastes, and deodorants contain pollen collected by bees)
- Explain how invasive species (e.g., zebra mussel, Asian long-horned beetle, purple loosestrife) reduce biodiversity in local environments

More information can be found here; <http://www.edu.gov.on.ca/eng/curriculum/>

The screenshot shows the Ontario Education website's curriculum page. At the top, the URL <http://www.edu.gov.on.ca/eng/curriculum/> is displayed. A search bar is located to the right of the URL. The navigation menu includes links for HOME, STUDENTS, PARENTS, TEACHERS, ADMINISTRATORS, ABOUT THE MINISTRY, and NEWS. The 'TEACHERS' link is highlighted with a red circle and an arrow pointing to a banner image of a teacher in a classroom. The banner features the word 'TEACHERS' and an upward-pointing red arrow. Below the banner, the 'Curriculum' section is titled. It contains two paragraphs of text: 'The new elementary Health and Physical Education curriculum will be posted on the ministry's website in the summer of 2019.' and 'This new age-appropriate curriculum will reflect input received from more than 72,000 engagements with parents, students, educators, employers and organizations from across Ontario.' Below the text, there are two links: 'Elementary Curriculum' and 'Secondary Curriculum'. The 'Elementary Curriculum' link is circled in blue, and the 'Secondary Curriculum' link is circled in purple. A red arrow points from the 'Secondary Curriculum' link towards the left. On the left side of the page, there is a sidebar with various menu items: 'Learning in Ontario' (with a dropdown arrow), 'Child Care', 'Full-Day Kindergarten', 'Elementary', 'Secondary', 'French-Language Education', 'Postsecondary', and 'Adult Learning'; 'Employment Ontario' (with a right-pointing arrow); 'Popular Topics' (with a right-pointing arrow); 'Publications' (with a right-pointing arrow); 'Frequently Asked Questions' (with a right-pointing arrow); and 'Explore Government'.

A list of Policy and Resource Documents for the Ontario Curriculum: [Elementary](#) and [Secondary](#) are available. This page contains useful and current tools that apply to all publicly funded elementary and secondary English-language