

Programme Website Information

Country Heritage Park

Programme 1

The Kindergarten Programme

Mr. Rogers said, "Play is often talked about as if it were a serious relief from learning. But for children, play is serious learning." Play-based learning is important to the cognitive and emotional development of each child. Kindergarteners will come to our site and enjoy a mix and match experiential learning opportunity that is unique to each class.

Choose from the following options to create your unique program:

(please choose 4 buildings for full day programme and 2 buildings for a half day programme)

Tractor Ride- Weather permitting, some travel between buildings will take place on a tractor where students can take in the view of the escarpment

Cassin Barn- The Cassin Barn is an interactive play center where children can explore. Various toys will be placed strategically throughout the barn with labels. Students should identify the various farm materials around the barn and make sure to place them in the correct spot while enjoying active play.

Plant Center-The Plant Center will be used to create various crafts related to farming. Students will engage in an interactive craft lesson learning the basics of a plant's life cycle, how farms feed communities, and understand that their favourite foods are grown on a farm.

Riley Barn- Experience our farm animals while exploring a real, 1940s working barn. They will see real farm animals and learn their relationship to us.

Lucas Homestead- See our 1860s farmstead, an interactive space that lets students explore a second-generation pioneer homestead. Included is our apple orchard, pollinator garden, barn, and vegetable garden.

Dairy- Explore milk production and see how milk travels from the cow to your homes.

Apple- Students will learn about apples, how apples grow and are harvested, and how many products come from apples. As well, they will learn about the important role bees play in not only apples, but all of our food.

IH Barn- This rare octagonal barn is the perfect location to see how farming technology has developed over time.

Programme 2

The Early Settler Experience

When Benjamin Freure arrived to Canada in 1836, he said, “The country here is beautiful, a rich soil, covered with timber, and well watered, and all the inhabitants the most social and good natured I ever met”. Students will learn how Canada has developed throughout the history of early settlers, such as Freure, and what resources may have elicited that change.

Grade 1

Program Features: Students will learn about the various roles in these early communities, what responsibilities fell to each role, and how these roles relied on each other. Students can also see how the natural world impacts these early pioneers, such as the use of a natural water source or how animals were used on a homestead.

Curriculum Connections

Subject: Social Studies

Unit: Heritage and Identity: Our Changing Roles and Responsibilities

- A1. Application: describe some of the ways in which people’s roles, relationships, and responsibilities relate to who they are and what their situation is, and how and why changes in circumstances might affect people’s roles, relationships, and responsibilities as well as their sense of self
- A3. Understanding Context: demonstrate an understanding that they and other people have different roles, relationships, and responsibilities, and that all people should be treated with respect, regardless of their roles, relationships, and responsibilities

Unit: People and Environments: The Local Community

- B1. Application: describe some aspects of the interrelationship between people and the natural and built features of their community, with a focus on how the features of and services in the community meet people’s needs

Grade 2

Program Features: Students can compare female and male roles in early settler societies. There will also be an opportunity for all students to experience both gender roles by trying out a few basic chores and pastimes on a farmstead.

Curriculum Connections

Subject: Social Studies

Unit: Heritage and Family: Changing Family and Community Traditions

- A1. Application: compare some significant traditions and celebrations among diverse groups and at different times, and identify some of the reasons for changes in these traditions/celebrations
- A2. Inquiry: use the social studies inquiry process to investigate some of the past and present traditions and celebrations within their own family and the communities to which they belong

Grade 3

Program Features: Students will be able to compare the lives of various early settlers and discuss some of the different challenges that each had to face. Students can also make comparisons to their own lives and the lives of early settlers.

Curriculum Connections

Subject: Social Studies

Unit: Heritage and Identity: Communities in Canada, 1780-1850

- A1. Application: compare ways of life among some specific groups in Canada around the beginning of the nineteenth century, and describe some of the changes between that era and the present day
- A2. Inquiry: use the social studies inquiry process to investigate some of the major challenges that different groups and communities faced in Canada from around 1780 to 1850, and key measures taken to address these challenges

Grade 4

Program Features: Students will have the opportunity to explore the simple machines from pioneer times and learn about how these machines helped them accomplish daily tasks. Students will look at pulleys and gears from the past in order to see how mechanisms and structures work.

Curriculum Connections

Subject: Science and Technology

Unit: Understanding life systems: Habitats and communities

- 1. analyse the effects of human activities on habitats and communities;

Unit: Understanding structures and mechanisms: Pulleys and gears

- 1. evaluate the impact of pulleys and gears on society and the environment;
- 2. investigate ways in which pulleys and gears modify the speed and direction of, and the force exerted on, moving objects

Grade 5

Program Features: Students will be exposed to different citizen roles in an early community and can discuss how each citizen both contributed to and relied upon others in their community. Once students are familiar with the different roles they will have the opportunity to use their problem-solving skills and work out different encounters that may arise for different community members.

Curriculum Connections

Subject: Social Studies

Unit: People and Environments: The Role of Government and Responsible Citizenship

- B3. Understanding Context: demonstrate an understanding of the roles and key responsibilities of citizens and of the different levels of government in Canada

Grade 6

Program Features: Students will experience aspects of an early settlers' community and the importance of immigration to small communities within Canada. Once students are familiar with the various minorities who populated early Canada they will have the opportunity to use their problem-solving skills and work out the various push and pull factors that brought early immigrants to Canada.

Curriculum Connections

Subject: Social Studies

Unit: Heritage and Identity: Communities in Canada, Past and Present

- A1. Application: Access contributions to Canadian identity made by various groups and by various features of Canadian communities and regions
- A3: Understanding Context: demonstrate an understanding of significant experiences of, and major changes and aspects of life in, various historical and contemporary communities in Canada

The Early Settler Challenge

Thought life was easy during early settlers times? Try it out for yourself with some cooperative and competitive activities that put you in the shoes of our early settlers.

Grade 7

Program Features: Students will participate in an interactive early settler challenge where they will complete four pioneer-focused challenges that are conducted in a relay race format. These challenges will vary but may include: tasks related to school life, the blacksmith, the farm, and home life.

Curriculum Connections

Subject: History

Unit: Canada, 1800-1850: Conflict and Challenges

- B1. Application: analyse aspects of the lives of various groups in Canada between 1800 and 1850, and compare them to the lives of people in Canada in 1713–1800
- B3. Understanding Historical Context: describe various significant events, developments, and people in Canada between 1800 and 1850, and explain their impact

Grade 8

Program Features: Students will participate in an interactive early settler challenge where they will complete four pioneer-focused challenges that are conducted in a relay race format. These challenges will vary but may include: tasks related to school life, the blacksmith, farm, and home life.

Curriculum Connections

Subject: History

Unit: Creating Canada, 1850- 1890

- A2. Inquiry: use the historical inquiry process to investigate perspectives of different groups on some significant events, developments, and/or issues that affected Canada and/or Canadians between 1850 and 1890
- A3. Understanding Historical Context: describe various significant events, developments, and people in Canada between 1850 and 1890, and explain their impact

Programme 4
Arts in the Park

When reflecting on what is art Lawren Harris said, “The truth is that works of art test the spectator much more than the spectator tests them”. During this programme, students will question and understand the subjectivity of art while also learning about various artistic mediums such as visual arts, drama, and dance.

Grade 1

Program Features: This program consists of two one-hour sessions (one in the morning, one in the afternoon). Half of the day will be spent creating a visual art project (e.g. painting or a craft etc.). The other half will be spent doing a more physical activity (e.g. dancing or a drama skit etc.). In this program students will focus on learning a particular technique that is relevant to their grade level.

Curriculum Connections

Subject: The Arts

Contrast: light/dark; large/small; pure/mixed colour

Unit: Visual Arts

- D1. Creating and Presenting: apply the creative process to produce a variety of two- and three-dimensional art works, using elements, principles, and techniques of visual arts to communicate feelings, ideas, and understandings;
- D2. Reflecting, Responding, and Analysing: apply the critical analysis process to communicate feelings, ideas, and understandings in response to a variety of art works and art experiences;
- D3. Exploring Forms and Cultural Contexts: demonstrate an understanding of a variety of art forms, styles, and techniques from the past and present, and their social and/or community contexts.

Grade 2

Program Features: This program consists of two one-hour sessions (one in the morning, one in the afternoon). Half of the day will be spent creating a visual art project (e.g. painting or a craft etc.). The other half will be spent doing a more physical activity (e.g. dancing or a drama skit etc.). In this program students will focus on learning a particular technique that is relevant to their grade level.

Curriculum Connections

Subject: The Arts

Repetition and rhythm: repetition of colour and shape in patterns; random, alternating, and regular patterns in everyday objects (e.g., textiles, ceramics) and in art (e.g., works by M. C. Escher)

Unit: Visual Arts

- D1. Creating and Presenting: apply the creative process to produce a variety of two- and three-dimensional art works, using elements, principles, and techniques of visual arts to communicate feelings, ideas, and understandings;

- D2. Reflecting, Responding, and Analysing: apply the critical analysis process to communicate feelings, ideas, and understandings in response to a variety of art works and art experiences;
- D3. Exploring Forms and Cultural Contexts: demonstrate an understanding of a variety of art forms, styles, and techniques from the past and present, and their social and/or community contexts.

Grade 3

Program Features: This program consists of two one-hour sessions (one in the morning, one in the afternoon). Half of the day will be spent creating a visual art project (e.g. painting or a craft etc.). The other half will be spent doing a more physical activity (e.g. dancing or a drama skit etc.). In this program students will focus on learning a particular technique that is relevant to their grade level.

Curriculum Connections

Subject: The Arts

Variety: slight variations on a major theme; strong contrasts (e.g., use of different lines, shapes, values, and colours to create interest [bright or light colour values, dark colour values])

Unit: Visual Arts

- D1. Creating and Presenting: apply the creative process to produce a variety of two- and three-dimensional art works, using elements, principles, and techniques of visual arts to communicate feelings, ideas, and understandings;
- D2. Reflecting, Responding, and Analysing: apply the critical analysis process to communicate feelings, ideas, and understandings in response to a variety of art works and art experiences;
- D3. Exploring Forms and Cultural Contexts: demonstrate an understanding of a variety of art forms, styles, and techniques from the past and present, and their social and/or community contexts.

Grade 4

Program Features: This program consists of two one-hour sessions (one in the morning, one in the afternoon). Half of the day will be spent creating a visual art project (e.g. painting or a craft etc.). The other half will be spent doing a more physical activity (e.g. dancing or a drama skit etc.). In this program students will focus on learning a particular technique that is relevant to their grade level.

Curriculum Connections

Subject: The Arts

Emphasis: use of colour intensity, contrast in value, placement and size of shapes, and/or weight of line to create a particular focal point

Unit: Visual Arts

- D1. Creating and Presenting: apply the creative process to produce a variety of two- and three-dimensional art works, using elements, principles, and techniques of visual arts to communicate feelings, ideas, and understandings;

- D2. Reflecting, Responding, and Analysing: apply the critical analysis process to communicate feelings, ideas, and understandings in response to a variety of art works and art experiences;
- D3. Exploring Forms and Cultural Contexts: demonstrate an understanding of a variety of art forms, styles, and techniques from the past and present, and their social and/or community contexts.

Grade 5

Program Features: This program consists of two one-hour sessions (one in the morning, one in the afternoon). Half of the day will be spent creating a visual art project (e.g. painting or a craft etc.). The other half will be spent doing a more physical activity (e.g. dancing or a drama skit etc.). In this program students will focus on learning a particular technique that is relevant to their grade level.

Curriculum Connections

Subject: The Arts

Proportion: the relationship of the size and shape of the parts of a figure to the whole figure; the scale of one object compared to its surroundings, with indications of how close and how large the object is (e.g., figures with childlike proportions that are approximately “five heads high” and adult figures that are approximately “seven or eight heads high”; caricature; use of improbable scale for imaginary settings and creatures)

Unit: Visual Arts

- D1. Creating and Presenting: apply the creative process to produce a variety of two- and three-dimensional art works, using elements, principles, and techniques of visual arts to communicate feelings, ideas, and understandings;
- D2. Reflecting, Responding, and Analysing: apply the critical analysis process to communicate feelings, ideas, and understandings in response to a variety of art works and art experiences;
- D3. Exploring Forms and Cultural Contexts: demonstrate an understanding of a variety of art forms, styles, and techniques from the past and present, and their social and/or community contexts.

Grade 6

Program Features: This program consists of two one-hour sessions (one in the morning, one in the afternoon). Half of the day will be spent creating a visual art project (e.g. painting or a craft etc.). The other half will be spent doing a more physical activity (e.g. dancing or a drama skit etc.). In this program students will focus on learning a particular technique that is relevant to their grade level.

Curriculum Connections

Subject: The Arts

Balance: arrangement of the elements of design to create the impression of equality in weight or importance (e.g., a formal or symmetrical arrangement produced through distribution of

shapes; an informal or asymmetrical arrangement produced through use of colour); colour concepts to be used in creating balance (e.g., light or neutral colours appear lighter in “weight” than dark or brilliant colours; warm colours seem to expand, cool colours seem to contract; transparent areas seem to “weigh” less than opaque areas)

Unit: Visual Arts

- D1. Creating and Presenting: apply the creative process to produce a variety of two- and three-dimensional art works, using elements, principles, and techniques of visual arts to communicate feelings, ideas, and understandings;
- D2. Reflecting, Responding, and Analysing: apply the critical analysis process to communicate feelings, ideas, and understandings in response to a variety of art works and art experiences;
- D3. Exploring Forms and Cultural Contexts: demonstrate an understanding of a variety of art forms, styles, and techniques from the past and present, and their social and/or community contexts.

Grade 7

Program Features: This program consists of two one-hour sessions (one in the morning, one in the afternoon). Half of the day will be spent creating a visual art project (e.g. painting or a craft etc.). The other half will be spent doing a more physical activity (e.g. dancing or a drama skit etc.). In this program students will focus on learning a particular technique that is relevant to their grade level.

Curriculum Connections

Subject: The Arts

Unit: Visual Arts

Unity and harmony: radial balance (e.g., a mandala); similarity (e.g., consistency and completeness through repetition of colours, shapes, values, textures, or lines); continuity (e.g., treatment of different elements in a similar manner); alignment (e.g., arrangement of shapes to follow an implied axis); proximity (e.g., grouping of related items together)

- D1. Creating and Presenting: apply the creative process to produce a variety of two- and three-dimensional art works, using elements, principles, and techniques of visual arts to communicate feelings, ideas, and understandings;
- D2. Reflecting, Responding, and Analysing: apply the critical analysis process to communicate feelings, ideas, and understandings in response to a variety of art works and art experiences;
- D3. Exploring Forms and Cultural Contexts: demonstrate an understanding of a variety of art forms, styles, and techniques from the past and present, and their social and/or community contexts.

Grade 8

Programme Features: This program consists of two one-hour sessions (one in the morning, one in the afternoon). Half of the day will be spent creating a visual art project (e.g. painting or a craft etc.). The other half will be spent doing a more physical activity (e.g. dancing or a drama

skit etc.). In this program students will focus on learning a particular technique that is relevant to their grade level.

Curriculum Connections

Subject: The Arts

Movement: actual lines to lead the viewer's eye (e.g., solid lines, dotted lines); subtle or implied "paths" using shape, value, and/or colour (e.g., an invisible path created by leading the eye from large shapes to small shapes, from shapes in dark colours to shapes in lighter colours, from familiar shapes to unfamiliar shapes, from colour to no colour); actual action (e.g., kinetic sculpture, animation); implied action (e.g., an invisible path created by an arrow, a gaze, or a pointing finger; the "freeze frame" effect of an object in motion, such as a bouncing ball suspended in mid-air or a runner about to take the next step)

Unit: Visual Arts

- D1. Creating and Presenting: apply the creative process to produce a variety of two- and three-dimensional art works, using elements, principles, and techniques of visual arts to communicate feelings, ideas, and understandings;
- D2. Reflecting, Responding, and Analysing: apply the critical analysis process to communicate feelings, ideas, and understandings in response to a variety of art works and art experiences;
- D3. Exploring Forms and Cultural Contexts: demonstrate an understanding of a variety of art forms, styles, and techniques from the past and present, and their social and/or community contexts.

Programme 6

How Farms Feed Us

Food literacy is essential to building a promising tomorrow for our future generations. Connect with Ontario farms to better understand how farms provide us with food and essential products.

Grade 1

Programme Features: Students will be able to review the different types of energy involved in farming, whether it's raising crops or livestock. They will investigate what the important factors of plant growth are and how they help provide for our communities.

Curriculum Connections

Subject: Science and Technology

Unit: Understanding Matter and Energy: Energy in our Lives

Overall Curriculum Expectations

- 2. Investigate how different types of energy are used in daily life
- 3. Demonstrate an understanding that energy is something that is needed to make things happen, and that the sun is the principal source of energy for the earth

Grade 2

Programme Features: Students will review properties of liquids and solids while investigating various food products. In our dairy building, for example, they will look at how foods are

transformed into different forms of matter, such as a liquid becoming a solid, and the methods used to achieve these transformations.

Curriculum Connections

Subject: Science and Technology

Unit: Matter and Energy: Property of Liquids and Solids

Overall Curriculum Expectations

- 2. Investigate the properties of and interactions among liquids and solids
- 3. Demonstrate an understanding of the properties of liquids and solids

Grade 3

Programme Features: Students will have the opportunity to learn about the importance of plants to our environment and to society. Students will be able to see the different stages of plant growth, identify the plant parts, and learn how important plants are for humans and animals. Plants are not just used for food, so we will investigate other purposes for plants on our property. Students will also analyze the importance of soil to plant growth.

Curriculum Connections

Subject: Science and Technology

Unit: Understanding Life Systems: Growth and changes in Plants

- 1. assess ways in which plants have an impact on society and the environment, and ways in which human activity has an impact on plants and plant habitats;
- 3. demonstrate an understanding that plants grow and change and have distinct characteristics.

Grade 4

Programme Features: Students will learn about the interdependence of plants, animals, and humans, looking at the relationship between them and their habitat. Students will plant their own seeds, learning the process of gardening and where our food comes from. They may also have the opportunity to work within our community gardens allowing students to see a variety of plants and their different growth patterns.

Curriculum Connections

Subject: Science and Technology

Unit: Understanding Life Systems: Habitats and Communities

- 1. analyse the effects of human activities on habitats and communities;
- 2. investigate the interdependence of plants and animals within specific habitats and communities;
- 3. demonstrate an understanding of habitats and communities and the relationships among the plants and animals that live in them.

Grade 5

Programme Features: Students will focus on how resources are turned into everyday products. They will examine various materials made on a farm and learn how we use these products in daily life. Students will work with these multiple products to understand how farms provide communities with essential commodities.

Curriculum Connections

Subject: Science and Technology

Unit: Understanding Matter and Energy: Properties of Changes in Matter

- 1. evaluate the social and environmental impacts of processes used to make everyday products
- 3. demonstrate an understanding of the properties of matter, changes of state, and physical and chemical change.

Grade 6

Programme Features: Students will discuss the biodiversity of farms as a whole, and how we get a variety of resources from there, such as different proteins, dairy products, vegetables, fruits, and grain products. Students will then discuss the pros and cons of various practices that may increase production but damage the environment.

Curriculum Connections

Subject: Science and Technology

Unit: Understanding Life Systems: Biodiversity

- 2. investigate the characteristics of living things, and classify diverse organisms according to specific characteristics;
- 3. demonstrate an understanding of biodiversity, its contributions to the stability of natural systems, and its benefits to humans

Grade 7

Programme Features: Students will investigate the impact farmers have had on the environment while comparing the escarpment to our 80 acre property. They will look at how human activity and technologies have affected our environment and discuss the future sustainability of our farms.

Curriculum Connections

Subject: Science and Technology

Unit: Understanding Life Systems: Interactions in the Environment:

Overall Expectations:

- 1. Assess the impacts of human activities and technologies on the environment, and evaluate ways of controlling these impacts
- 2. Investigate interactions within the environment and identify factors that affect the balance between different components of an ecosystem

Grade 8

Programme Features: Students will investigate the systems of farming by focusing on the processes of independent systems within a farm. They can identify inputs such as farmers planting seeds, feeding livestock, caring for their animals and fields, etc. They will then discuss outputs which are the various resources that farmers produce to sell.

Curriculum Connections

Subject: Science and Technology

Unit: Understanding Structures and Mechanisms: Systems in Action

- 3. demonstrate an understanding of different types of systems and the factors that contribute to their safe and efficient operation.

- 3.1 identify various types of systems (e.g., mechanical systems, body systems, optical systems, mass transit systems, Aboriginal clan systems, health care systems)
- 3.2 identify the purpose, inputs, and outputs of various systems (e.g., a garden – purpose: to grow things; input: seeds, water, fertilizer; output: flowers, food)
- 3.3 identify the various processes and components of a system (e.g., robot, front-end loader/backhoe, heating system, transportation system, health care system) that allow it to perform its function efficiently and safely

Programme 7

Habitats, Food Chains and Ecosystems

Albert Einstein said, “If there were no more bees, there would be no more pollination, no more plants, no more animals, and no more man”. Learn about how healthy ecosystems are essential to the future of humanity through understanding aspects such as biodiversity, food chains, habitats, and environmental conditions.

Curriculum Overall Expectations

Grade 1

Subject: Science and Technology

Unit: Understanding Life Systems: Need and Characteristics of Living Things

- investigate needs and characteristics of plants and animals, including humans;
- demonstrate an understanding of the basic needs and characteristics of plants and animals, including humans

Program Features for Grade 1: Students will have the opportunity to participate in a scavenger hunt where they will learn about a specific animal’s characteristics and its surrounding ecosystem. They will also create a craft that follows the theme of the programme.

Grade 2

Subject: Science and Technology

Unit: Understanding Life Systems: Growth and Changes in Animals

- assess ways in which animals have an impact on society and the environment, and ways in which humans have an impact upon animals and the places where they live;
- investigate similarities and differences in the characteristics of various animals;
- demonstrate an understanding that animals grow and change and have distinct characteristics.

Program Features for Grade 2: Students will have the opportunity to participate in a scavenger hunt, where they will learn about a specific animal’s characteristics and its ecosystem. Students will further look at the natural homes that animals build and also have the opportunity to see man-made habitats. They will also create a craft that follows the theme of the programme.

Grade 3

Subject: Science and Technology

Unit: Understanding Life Systems: Growth and Changes in Plants

- assess ways in which plants have an impact on society and the environment, and ways in which human activity has an impact on plants and plant habitats;
- investigate similarities and differences in the characteristics of various plants, and ways in which the characteristics of plants relate to the environment in which they grow;
- demonstrate an understanding that plants grow and change and have distinct characteristics.

Unit: Understanding Earth and Space Systems: Soils in the Environment

- investigate the composition and characteristics of different soils;
- demonstrate an understanding of the composition of soils, the types of soils, and the relationship between soils and other living things.

Program Features for Grade 3: Students will have the opportunity to participate in a scavenger hunt, where they will learn about a specific animal's characteristics and ecosystem. They will investigate various plants which are integrated into animal habitats and make connections between soil and living things. They will also create a craft that follows the theme of the programme.

Grade 4**Subject: Science and Technology****Unit: Understanding Life Systems: Habitats and Communities**

- analyse the effects of human activities on habitats and communities;
- investigate the interdependence of plants and animals within specific habitats and communities;
- demonstrate an understanding of habitats and communities and the relationships among the plants and animals that live in them.

Program Features for Grade 4: On a site walk, students will be able to view different examples of ecosystems, and will be able to build their own. Students will then play a survival game in which they take on the various roles present in nature (herbivore, carnivore, producer, decomposer) and discover how they interact with each other.

Grade 5**Subject: Science and Technology****Unit: Understanding Earth and Space Systems: Conservation of Energy and Resources**

- analyse the immediate and long-term effects of energy and resource use on society and the environment, and evaluate options for conserving energy and resources;
- investigate energy transformation and conservation;
- demonstrate an understanding of the various forms and sources of energy and the ways in which energy can be transformed and conserved.

Program Features for Grade 5: On their site walk, students will be able to view different examples of ecosystems and how farmers attempt to replicate them. They will then be able to try to replicate one themselves. Students will then play a survival game in which they take on the various roles present in nature (herbivore, carnivore, producer, decomposer) and discover how they interact with each other.

Grade 6

Subject: Science and Technology

Unit: Understanding Life Systems: Biodiversity

- assess human impacts on biodiversity, and identify ways of preserving biodiversity;
- investigate the characteristics of living things, and classify diverse organisms according to specific characteristics;
- demonstrate an understanding of biodiversity, its contributions to the stability of natural systems, and its benefits to humans.

Program Features for Grade 6: On their site walk, students will be able to compare and contrast a natural habitat with a man-made one. Students will then play a survival game in which they take on the various roles present in nature (herbivore, carnivore, producer, decomposer) and discover how they interact with each other.

Grade 7

Subject: Science and Technology

Unit: Understanding Life Systems: Interactions in the Environment

- assess the impacts of human activities and technologies on the environment, and evaluate ways of controlling these impacts;
- investigate interactions within the environment, and identify factors that affect the balance between different components of an ecosystem;

Program Features for Grade 7: On their site walk, students will be able to view the importance of soil and the dependence plants have on it. Then, in an interactive survival game, students will better understand the roles of producers (plants), consumers (herbivores, carnivores) and decomposers (fungi, bacteria) with added “chaotic” elements to represent the unpredictability of nature.

Grade 8

Subject: Science and Technology

Unit: Understanding Earth and Space Systems: Water Systems

- investigate factors that affect local water quality;
- demonstrate an understanding of the characteristics of the earth’s water systems and the influence of water systems on a specific region.

Program Features for Grade 8 On their site walk, students will be able to view different examples of ecosystems and how farmers attempt to replicate them. Students will learn about the importance of water to humans, plants, and animals. They will then do a pH testing activity to learn about the relationship between the pH level, water temperature, and the organisms living there. This activity will further allow students to gain knowledge about why clean water is important to maintaining healthy habitats. Then, in an interactive survival game, students will better understand the roles of producers (plants), consumers (herbivores, carnivores, omnivores) and decomposers (fungi, bacteria) with added “chaotic” elements to represent the unpredictability of nature.

Programme 9
Simple and Complex Machines

Creativity and innovation has been, and continues to be, the foundation to improving human life. Explore how innovation has led to the creation of simple and complex machines and understanding how these have contributed to the advancements in technology.

Grade 1

Program Features: After observing some implements found in a farming environment, students will test which tools are best used for certain jobs. Students will also look at the qualities that make some materials better for some jobs than others. For example, try moving straw with a shovel, then with a pitchfork.

Curriculum Connections

Subject: Science and Technology

Unit: Understanding Structures and Mechanisms: Materials, Objects and Everyday Structures

- 2. Investigate structures that are built for a specific purpose to see how their design and materials suit the purpose
- 3. Demonstrate an understanding that objects and structures have observable characteristics and are made from materials with specific properties that determine how they are used

Grade 2

Program Features: Students will focus on how simple machines help objects move from one place to another, and how these machines make our lives easier. Students will learn about the six types of simple machines (e.g. levers, pulleys, or inclined planes etc.) during this program. Students will also participate in various activities to help them see the different types of simple machines in everyday objects (e.g. heavy loads like a bale of straw can be lifted using less energy with pulley systems).

Curriculum Connections

Subject: Science and Technology

Unit: Understanding Structures and Mechanisms: Movement

- 2. investigate mechanisms that include simple machines and enable movement;
- 3. demonstrate an understanding of movement and ways in which simple machines help to move objects.

Grade 3

Program Features: Students will have the opportunity to explore various structures on our property. Students will learn how structure, strength, and stability affect each building and what elements affect the various structures. Students will then be given the challenge of building their own structures (e.g. materials can include: sticks, straws, tape, glue etc.). If students complete the project, their structures will be tested.

Curriculum Connections

Subject: Science and Technology

Unit: Understanding Structures and Mechanisms: Strong and Stable Structures

- 2. investigate strong and stable structures to determine how their design and materials enable them to perform their load-bearing function;
- 3. demonstrate an understanding of the concepts of structure, strength, and stability and the factors that affect them.

Grade 4

Program Features: Students will review the purpose of simple machines and focus specifically on where we find pulleys and gears in our buildings and displays. Students will use examples of pulleys and gears to make the tasks they've been assigned easier. Students will visit various buildings to view a clear example as to how simple machines have helped progress technology. Once students have seen pulleys and gears in action they will design their own pulley and gear circuit. They will present their circuits to the class and explain their choices of materials and placement.

Curriculum Connections

Subject: Science and Technology

Unit: Understanding Structures and Mechanisms: Pulleys and Gears

- 2. Investigate ways in which pulleys and gears modify the speed and direction of, and the forces exerted on, moving objects
- 3. Demonstrate and understanding of the basic principles and functions of pulley and gear systems

Grade 5

Program Features: Students will review some of the forces that have an effect on structures and mechanisms (wind, hurricanes, earthquakes, etc.) and use this information to devise a solution to a wind or water erosion scenario. Students will theorize what changes need to be made in order to reduce the negative impact forces have on their building or structure. Students will test their devices and record data in order to make improvements to their devices.

Curriculum Connections

Subject: Science and Technology

Unit: Understanding Structures and Mechanisms: Forces Acting on Structures and Mechanisms

- 2. investigate forces that act on structures and mechanisms;
- 3. identify forces that act on and within structures and mechanisms, and describe the effects of these forces on structures and mechanisms.

Grade 6

Program Features: Visit our property and explore various examples of flight. Once students have had the opportunity to see how the environment and flight interact they will participate in an interactive activity. Students will build their own flight mechanism from various materials and then test their creation on our property.

Curriculum Connections

Subject: Science and Technology

Unit: Understanding Structures and Mechanisms: Flight

- 2. investigate ways in which flying devices make use of properties of air;
- 3. explain ways in which properties of air can be applied to the principles of flight and flying devices.

Unit: understanding life systems: Biodiversity

- 2. investigate the characteristics of living things, and classify diverse organisms according to specific characteristics;

Grade 7

Program Features: Students will see various examples of structural form and the forces that act on and within them during their site tour. They will investigate specific buildings to discover the relationship between both their design and function. Students will have the opportunity to design and build bridges and test them to determine how their structure and form affect their function.

Curriculum Connections

Subject: Science and Technology

Unit: Understanding Structures and Mechanisms: Form and Function

- 2. design and construct a variety of structures, and investigate the relationship between the design and function of these structures and the forces that act on them;
- 3. demonstrate an understanding of the relationship between structural forms and the forces that act on and within them.

Grade 8

Program Features: Students will observe how hydraulics are used as a standard feature on modern farm machinery and how it is important to maintain these systems for safe and efficient operation. They will also develop a system that uses hydraulics to make the completion of a task easier.

Curriculum Connections

Subject: Science and Technology

Unit: Understanding Structures and Mechanisms: Systems in Action

- 2. investigate a working system and the ways in which components of the system contribute to its desired function;
- 3. demonstrate an understanding of different types of systems and the factors that contribute to their safe and efficient operation

Programme 10

Sustainability

Environmental protection and awareness is fundamental to maintaining a balanced ecology. Students will examine and brainstorm how environmental sustainability is an essential part of our personal growth and to becoming global citizens.

Grade 1

Program Features: Students will learn about how humans have harnessed the environment to transform energy to suit their needs. Students can also compare and contrast the types of energy they use in their daily lives, and compare it to the different energy sources used in the past.

Curriculum Connections

Subject: Social Studies

Unit: People and Environments: The Local Community

- B1. Application: describe some aspects of the interrelationship between people and the natural and built features of their community, with a focus on how the features of and services in the community meet people's needs

Subject: Science and Technology

Unit: Understanding Matter and Energy: Energy in Our Lives

- 1. assess uses of energy at home, at school, and in the community, and suggest ways to use less energy;
- 2. investigate how different types of energy are used in daily life;
- 3. demonstrate an understanding that energy is something that is needed to make things happen, and that the sun is the principal source of energy for the earth

Grade 2

Program Features: While exploring different types of sustainable energy, students will focus on water and air and how they are harnessed and used by people to meet their needs. For example, water was both a power source and a resource.

Curriculum Connections

Subject: Science and Technology

Unit: Understanding Earth and Space Systems: Air and water in the environment

- 1. assess ways in which the actions of humans have an impact on the quality of air and water, and ways in which the quality of air and water has an impact on living things
- 3. demonstrate an understanding of the ways in which air and water are used by living things to help them meet their basic needs.

Grade 3

Program Features: Students will compare soil samples in different areas of the farm. They will visit our compost area (or worm farm) to see the progress of decomposition of organic matter into soil. We will discuss the importance of soils and the growth of crops.

Curriculum Connections

Subject: Science and Technology

Unit: Understanding Earth and Space Systems: Soils in the Environment

- 2. Investigate the composition and characteristics of different soils
- 3. Demonstrate an understanding of the composition of soils, the types of soils, and the relationship between soils and living things

Grade 4

Program Features: Students will learn about the farm habitat and how its food chain connects to our communities. Students will do activities focused on food chains to see how our current farming system may not encourage sustainability. Students will consider what changes need to be made to maintain a sustainable environment.

Subject: Science and Technology

Unit: Understanding Life Systems: Habitats and Communities

- 1. analyse the effects of human activities on habitats and communities;
- 2. investigate the interdependence of plants and animals within specific habitats and communities;
- 3. demonstrate an understanding of habitats and communities and the relationships among the plants and animals that live in them

Grade 5

Program Features: While looking at different forms of sustainable energy, students can examine how structures were created with the purpose of harnessing environmental forces. For example, wind can have an impact on structures and mechanisms, but windmills were created to convert wind force into usable energy.

Curriculum Connections

Subject: Science and Technology

Unit: Understanding Structures and Mechanisms: Forces Acting on Structures and Mechanisms

- 1. analyse social and environmental impacts of forces acting on structures and mechanisms;
- 2. investigate forces that act on structures and mechanisms;
- 3. identify forces that act on and within structures and mechanisms, and describe the effects of these forces on structures and mechanisms.

Grade 6

Program Features: Students will be able to look at some of the ways electricity was generated in the past (e.g a windmill or waterwheel) and how these methods compare or contrast to today. Students will visit the waterwheel and windmill that are found on site to investigate how they affect human livelihood and the environment.

Curriculum Connections

Subject: Science and Technology

Unit: Understanding Matter and Energy: Electricity and Electrical Devices

- 1. evaluate the impact of the use of electricity on both the way we live and the environment;

Grade 7

Program Features: Students will be able to see examples of different ways farmers have used the physical environment in order to create the energy and resources that they need. They will also be able to look at how sustainable forms of energy from the past differ from the present, and how our use of new sources affects sustainability.

Curriculum Connections

Subject: Geography

Unit: Physical Patterns in a Changing World

- A1. Application: analyse some challenges and opportunities presented by the physical environment and ways in which people have responded to them

Unit: Natural Resources Around the World: Use and Sustainability

- B1. Application: analyse aspects of the extraction/harvesting and use of natural resources in different regions of the world, and assess ways of preserving these resources
- B2. Inquiry: use the geographic inquiry process to investigate issues related to the impact of the extraction/harvesting and/or use of natural resources around the world from a geographic perspective
- B3. Understanding Geographic Context: demonstrate an understanding of the sources and use of different types of natural resources and of some of the effects of the extraction/harvesting and use of these resources

Subject: Science and Technology

Unit: Understanding Life Systems: Interactions in the Environment

- 1. assess the impacts of human activities and technologies on the environment, and evaluate ways of controlling these impacts;
- 2. investigate interactions within the environment, and identify factors that affect the balance between different components of an ecosystem;

Grade 8

Program Features: Students will focus on what issues Canadian farmers are facing in our society. They will learn about how different locations were or were not sustainable and how the farming equipment has evolved over time. Students will decide whether these advances are positive or problematic for our present and future. They will do a scenario activity that is focused on sustainability and farming to see how they intertwine.

Curriculum Connections

Subject: Geography

Unit: Global Settlement: Patterns and Sustainability

- 1. Application: analyse some significant interrelationships between Earth's physical features and processes and human settlement patterns, and some ways in which the physical environment and issues of sustainability may affect settlement in the future
- 2. Inquiry: use the geographic inquiry process to investigate issues related to the interrelationship between human settlement and sustainability from a geographic perspective