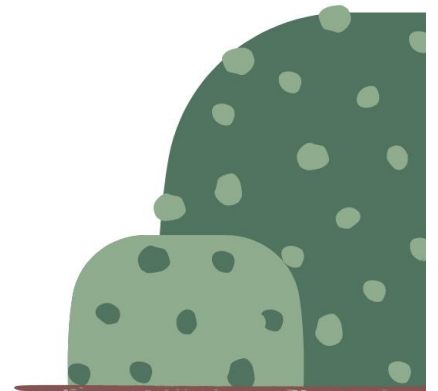


OUTDOOR LEARNING RESOURCES

A collection of resources and activities for teachers

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Outdoor Learning Resources

More and more, educators are understanding the benefits of extending classroom learning outside for student well-being, engagement and enhanced learning.

Learning for a Sustainable Future (LSF) has always supported outdoor learning. We recommend outdoor learning as a vehicle for sustainability and inquiry education, and student engagement. We propose that any space outdoors is a place where rich and meaningful learning opportunities are bound to take place!

LSF has identified and reviewed a wide range of learning activities and outdoor games, available on LSF's Resources for Rethinking (www.R4R.ca) database, that connect students to nature and support nature-centered learning outcomes.

www.R4R.ca is a free online database which provides access to over 1,300 excellent, peer-reviewed, curriculum-matched resources for educators from hundreds of publishers. These resources include lesson plans, activities, children's literature, and videos. Educators can search by language, jurisdiction, grade, subject, curriculum unit, and sustainability theme in order to get the perfect resource. About 10,000 teachers per month visit the R4R.ca website to access resources.

We have collected some excellent resources from www.R4R.ca to help you take the first steps outside or expand your outdoor learning opportunities! You will find attached activities and outdoor games for elementary, middle and secondary students with subject and seasonal recommendations.

LSF has other programs to support you in taking your students outdoors! Please visit <https://resources4rethinking.ca/en/outdoor-learning> for more information.

Learning for a Sustainable Future (LSF) is a Canadian charitable organization whose mission is to promote, through education, the knowledge, skills, values, perspectives, and practices essential to a sustainable future. LSF's innovative programs and strategic partnerships are reshaping education policy and transforming learning methods, helping students learn to address the increasingly difficult economic, social, and environmental challenges of the 21st century.

For further information on our programs, please contact us at: Learning for a Sustainable Future
343 York Lanes, York University, 4700 Keele Street, North York, ON M3J1P3 E-mail:
info@LSF-LST.ca Phone: 1.877 250-8202 Website: www.LSF-LST.ca

OUTDOOR ACTIVITIES 2021

Elementary/Middle Level
Middle Level/Secondary

I. LEARNING ACTIVITIES THAT CONNECT STUDENTS TO NATURE

Resource Title	Synopsis	Curriculum Connections		Season
		Grade Level	Subject Area	
Nature Walk	After reading a seasonal story, students explore an area around the school looking for living & non-living items. Back inside, students create their own nature inspired story based on their experience. <i>Subject Content:</i> Living and built environment, observing & recording, artistic expression	Early Elementary	Science & Arts	Year-round
Natural Figures	After discussing the shapes of different living things, students search for and draw organisms with the geometric shapes matching those on an observation sheet and share their findings. <i>Subject Content:</i> Geometric shapes, observing & recording.	Early Elementary	Science and Math	Spring Summer Fall
The Shape of Things	Students focus on the many shapes that are found in both natural and built environment around their school to promote an appreciation of and connection to nature. <i>Subject Content:</i> Classification, patterns, connecting to nature	Early Elementary	Science, Math, Art & Social Studies	Year-round
Leaf Magic	Students adopt a tree and observe it throughout the fall to deepen students' awareness of individual trees and encourage a greater appreciation of their local environment. <i>Subject Content:</i> Trees, seasonal change, leaf pigments	Early Elementary	Science	Fall
Budhurst Buddies	Students learn about plant features in a story, then identify a near-by flowering tree or shrub to observe & monitor throughout the year. <i>Subject Content:</i> Plant adaptations, seasonal changes, observing & recording, citizen science, stewardship	Early Elementary	Science	Year-round
Bug Study	Students investigate the tiny creatures that inhabit a natural area of the schoolyard using simple tools and their senses. They classify the plants and animals and investigate how tiny animals meet their survival needs. <i>Subject Content:</i> Insects, biodiversity, classification, adaptation, observing & recording	Early Elementary	Science, Math & Social Studies	Spring Summer Fall
A Spring Walk	An easy-to-implement template for planning and guiding a spring walk to connect students to the natural	Early Elementary	Science & Social Studies	Spring

Resource Title	Synopsis	Curriculum Connections		Season
		Grade Level	Subject Area	
	environment of their community. <i>Subject Content:</i> Living things, creating a story			
Dandelion	In this inquiry for very young learners, students observe dandelions in the schoolyard to explore some of the requirements for plant growth. <i>Subject Content:</i> Plants, plant growth, conducting an inquiry	Early elementary	Science	Spring Summer
Nature Survey	Students survey organisms in a local green space and describe their findings in charts, pictographs and drawings. They sort and count the organisms and consider actions to take on behalf of the living things they encountered. <i>Subject Content:</i> Plants & animals, habitats, classification, data collection, patterns & relationships	Early Elementary	Science, Math & Social Studies	Spring Summer Fall
Who Has Seen the Wind	Students make and decorate a personal pinwheel to investigate how the wind acts on objects. This sets the stage for a discussion of wind energy. <i>Subject Content:</i> Energy, renewable energy, electricity	Early Elementary	Science	Year-round
Get to Know Nature	Students describe plants and animals that live in their community, take part in a biodiversity scavenger hunt & work together to create a nature guide for use in their neighborhood. <i>Subject Content:</i> Plant and animal characteristics, biodiversity, adaptations, stewardship	Elementary	Science, Social Studies & Language Arts	Spring Summer Fall
Snow Fleas	The resource guides a search for snow fleas/springtails. It includes helpful hints as to the best times and locations to find and observe these active winter insects in the school yard. <i>Subject Content:</i> Invertebrates, biodiversity, observing & recording	Elementary	Science	Winter
A Walk in the Park	Students conduct an inventory of trees in a nearby park or treed area by recording observations and collecting leaves/twigs etc for classroom analysis. <i>Subject Content:</i> Characteristics of trees, deciduous vs evergreen, biodiversity, natural cycles & seasonal changes	Elementary	Science	Spring Summer Fall
Signs of Fall	Students take a fall walk through an area in or near their schoolyard where there are a variety of trees. They observe the different tree types, collect leaves & note signs fall. <i>Subject Content:</i> Evergreen vs deciduous, leaf pigments, seasonal changes, recording & observing	Elementary	Science & Art	Fall
Sweet Deal	This guide supports a class excursion to the sugar bush. It includes pre, during and post excursion activities that link the experience to the curriculum. <i>Subject Content:</i> Appreciating the natural world, Indigenous knowledge	Elementary	Science & Social Studies & Math	Spring

Resource Title	Synopsis	Curriculum Connections		Season
		Grade Level	Subject Area	
Litter We Know	Following a 'clean-up' of the school grounds students, sort and present their findings in tables and graphs. <i>Subject Content:</i> Stewardship, consumption/waste, data collection, analysis, presentation	Elementary & Middle	Math, Social Studies & Science	Spring Summer Fall
Bugs Don't Bug Me	Part of larger unit devoted to understanding aquatic invertebrates, students visit an aquatic habitat to investigate the connection between land use, water quality and invertebrate diversity. <i>Subject Content:</i> Insects, biodiversity, aquatic habitats, water quality, human impacts	Elementary & Middle	Science	Spring Summer Fall
Get to Know: Insects	Students hunt for live insects in easy to access places. Focus is on experiencing the diversity and ubiquitous nature of insects. <i>Subject Content:</i> Insect morphology, distribution and behavior	Elementary & Middle	Science	Spring Summer Fall
Pollinators in Peril	Students visit the schoolyard or local green space and observe pollinators in action. 'Help Wanted' ads are then created highlighting the features of effective pollinating insects. <i>Subject Content:</i> Animal diversity, interconnections, pollination and pollinators.	Elementary & Middle	Science	Spring Summer
Attracting & Studying Hummingbirds	Students learn where and how to plant flowers to attract hummingbirds, how to build a feeder and make their own nectar. <i>Subject Content:</i> Hummingbird ecology, stewardship	Elementary & Middle	Science	Spring Summer
Get to Know: Birds	Students learn to identify birds by sight and sound. <i>Subject Content:</i> Bird identification and behavior, observation & recording information, biodiversity	Elementary & Middle	Science	Spring Summer Fall
Fall Leaf Globe	Students collect fall leaves in the schoolyard to design and create a piece of artwork. <i>Subject Content:</i> Appreciating the natural world, seasons, art design and creation	Elementary & Middle	Art	Fall
Biosphere Biokit Activities	This multi-activity resource supports an outing to witness and record the local biodiversity. <i>Subject Content:</i> Ecosystem dynamics, biodiversity, observing & recording, stewardship	Upper Elementary & Middle	Science & Social Studies	Year-round
Poetry in the Schoolyard	In this reflective writing activity students explore the sights, sounds and smells of nature during a walk in the school yard or nearby natural area. <i>Subject Content:</i> Observation skills, creative writing, living things	Upper Elementary & Middle	Language Arts & Science	Spring Summer Fall
Creating a Three Sisters Garden	Students replicate the Indigenous tradition of planting beans, corn & squash together. <i>Subject Content:</i> Growth requirements of plants, gardening, nutrition, native plants, Indigenous tradition,	Upper Elementary & Middle	Science & Social Studies	Spring Summer Fall

Resource Title	Synopsis	Curriculum Connections		Season
		Grade Level	Subject Area	
Name That Tree	Students visit an area with a variety of trees to observe similarities and differences. Using a cell phone app, they photograph, identify & learn about the trees they encounter. <i>Subject Content:</i> Plant structure, tree identification, importance of trees	Upper Elementary & Middle	Science & technology	Summer Fall
Meet a Plant Up Close and Personal	Students select one plant to observe in the schoolyard or nearby natural area, practicing observations techniques learned prior to going outside. <i>Subject Content:</i> Plant structure, adaptations, observation & recording information	Upper Elementary & Middle	Science	Spring Summer Fall
Bees in the Edible Schoolyard- No Hive	Students locate and safely catch bees to observe structural features before releasing them unharmed. <i>Subject Content:</i> Insect structure, pollination & food production, habitat preservation, human disturbance, stewardship	Middle	Science	Spring Summer Fall
Dandelion vs Plantain	Students conduct a plant survey in the schoolyard in this math/science lesson. <i>Subject Content:</i> Scientific inquiry, plant adaptations, competition, data collection, recording & extrapolation.	Middle	Math & Science	Spring Summer
Area and Perimeter of Leaves	Students locate leaf specimens in the schoolyard or nearby natural area and use math tools to make calculations. <i>Subject Content:</i> Math concepts of area and perimeter, leaf variation	Middle	Math	Summer Fall
Buggin' Out	Students observe invertebrates found around the school to carry out a scientific inquiry. <i>Content:</i> Invertebrates, qualitative vs quantitative observations, bio-indicators, scientific inquiry, report writing	Middle	Science & Language Arts	Spring Summer Fall
Tracks in the Snow..In the Classroom	In a near-by natural area or the schoolyard, students identify and interpret animal tracks left behind in the snow. <i>Subject Content:</i> Interconnections, track identification, population dynamics, animal adaptations	Upper Elementary, Middle & Secondary	Science	Winter
School Nest Watch Program	Students construct and observe nesting structures for several bird species in the school yard. Developed in support of <i>School Nest Watch Program</i> . <i>Subject Content:</i> Bird identification & behavior, habitat, biodiversity, citizen science, stewardship	Upper Elementary, Middle & Secondary	Science	Winter Spring
Are We Disturbing Birds	Students look for evidence of human activity that may be impacting bird habitat. They develop an action plan to address negative disturbances. <i>Subject Content:</i> Habitat, human impact, limiting factors, stewardship	Middle & Secondary	Science, Geography & Language Arts	Year-round
Providing a Backyard	Students create a winter feeding station for birds and small animals in the schoolyard. <i>Subject Content:</i> Bird	Middle & Secondary	Science	Winter

Resource Title	Synopsis	Curriculum Connections		Season
		Grade Level	Subject Area	
Feeding Station for Birds	behavior, biodiversity, adaptation, stewardship,			
Pollen Collections: Who's in Your Schoolyard	Students simulate crime scene investigators by using forensic techniques that include taking pollen samples. <i>Subject Content:</i> Plant structure & adaptation, pollination, field & laboratory techniques	Middle & Secondary	Science	Spring Summer Fall
Bugs. Clues to the Environment	Students sample and Identify aquatic invertebrates and learn how they can be used to monitor water quality. <i>Subject Content:</i> Invertebrate identification, distribution & adaptation, aquatic habitats, water quality	Middle & Secondary	Science	Spring Summer Fall
Snow Characteristics	Students investigate the insulating qualities of snow and consider their findings in the context of adaptation to limiting factors. <i>Subject Content:</i> Animal adaptations, limiting factors, winter ecology	Middle & Secondary	Science	Winter
Who Can Live Here	Students apply their understanding of habitat requirements to assess the fitness of the schoolyard or local natural area as wildlife habitat. <i>Subject Content:</i> Habitat requirements, data collection & analysis, stewardship	Middle & Secondary	Science	Year-round
A Leaf Lunch	Students examine decomposition processes in a package of leaves placed in a stream or pond. <i>Subject Content:</i> Invertebrate identification, trophic levels, energy flow, materials cycles	Middle & Secondary	Science	Spring Summer Fall
Nature Walk: Decomposers	Students investigate leaf litter, compost and other areas with detritus in the schoolyard or nearby forest to find & identify common macro-decomposers. <i>Subject Content:</i> Decomposition, decomposers, nutrient cycles, heterotrophs,	Middle & Secondary	Science	Spring Fall
Tracking Aliens	Students conduct a biodiversity survey of a local natural area and assess the relationships of the species found there. <i>Subject Content:</i> Ecosystem concepts, species identification, native vs non-native species, recording & managing data, stewardship	Secondary	Science	Spring Summer Fall
Outdoor Learning: Census or Sample	Students carry out an inventory of living things found in their schoolyard and determine a Biodiversity Index. Based on results, they consider options for increasing the biodiversity of the area. <i>Subject Content:</i> Data collection & analysis, biodiversity & biodiversity index, stewardship	Secondary	Math and Science	Spring Summer Fall

II. COMPILATIONS OF OUTDOOR LEARNING ACTIVITIES THAT CONNECT STUDENTS TO NATURE

Resource Title	Synopsis	Curriculum Connections		
		Grade Level	Subject Area	
Growing Up Wild	A compilation of 27 lessons and 400 activities designed to connect to nature by exploring the world immediately around them. <i>Subject Content:</i> Diversity, structure, behavior, interrelationships of local plants & animals, habitats, life cycles	Elementary	Science, Math, Social Studies, Language Arts, Physical Education	Spring Summer Fall
Five Minute Field Trips.	A compilation of outdoor learning activities designed to take place in most schoolyards. A wide range of experiences promote awareness and appreciation of, and action for, the nature. <i>Subject Content:</i> Appreciating the natural world, biodiversity, ecosystems.	Elementary & Middle	Science, Language Arts, Social Studies,	Year-round
Into Nature	A compilation of >50 easy to implement outdoor learning experiences that connect students with nature. Activities introduce students to a variety of habitats, species and ecological processes and concepts. <i>Subject Content:</i> Connecting to and appreciating the natural world, biodiversity,	Elementary & Middle	Science, Math, Language Arts	Spring Summer Fall
Movers, Sleepers and Tough Guys	One of 40 lessons found in the compilation, Lessons in a Backpack that address a range of curriculum outcomes through easy-to-implement outdoor experiences. <i>Subject Content:</i> Plants & animals, biodiversity, habitats, seasonal changes, stewardship.	Elementary & Middle	Science	Year-round
Patterns Through the Seasons	A compilation of 13 learning activities related to growing and maintaining a school food garden. Students experiences in managing & maintaining the garden serve as an extension to their classroom learning. <i>Subject Content:</i> Plant growth, soils, pollination, healthy eating, food security, human encroachment	Elementary & Middle	Science & Social Studies	Year-round
Connecting with Nature	Compilation of 15 lessons that combine outdoor and indoor experiences to help students explore t& appreciate the natural world. <i>Subject Content:</i> Ecosystem concept, biodiversity, renewable energy, responsible consumption, stewardship, patterns & relations	Upper Elementary & Middle	Science, Math, Social Studies, Language Arts, Health & Physical Education	Spring Summer Fall
A Guide to Growing a Butterfly Garden	The resource provides step by step instructions & background information to support a butterfly gardening project and ensure success. A number of classroom activities are included. <i>Subject Content:</i> Migration, habitat loss, plant growth, native species, stewardship	Upper Elementary, Middle & Secondary	Science	Spring

III. OUTDOOR GAMES TO SUPPORT NATURE-CENTERED LEARNING OUTCOMES

Resource Title	Synopsis	Curriculum Connections		
		Grade Level	Subject Area	
Animal Seed Dispersal Game	Students become squirrels preparing for winter to illustrate how some trees use animals to disperse their seeds. <i>Subject Content:</i> Living things, adaptations, interrelationships	Early Elementary	Science	Fall
The Monarch Migration	In game format, students simulate the Monarch's migration to experience first-hand the many challenges involved and the interconnections of the natural world. <i>Subject Content:</i> Migration, population dynamics, habitat loss, human impact	Elementary	Science	Spring Summer Fall
Migration Challenge	In 3 games students simulate migrating birds to learn how and why this is essential behavior. <i>Subject Content:</i> Animal migration, adaptation, habitats, human impact	Elementary	Science & Physical Education	Spring Summer Fall
Macro invertebrates. What Wetland Bugs Can Teach Us	In a relay-style game, students experience the effects of pollution on aquatic macro invertebrate species. The activity serves as a precursor to an investigation of a local wetland. <i>Subject Content:</i> Invertebrate identification & behavior, water quality, aquatic habitat, human disturbance, stewardship	Upper Elementary	Science	Spring Summer Fall
Dinner for Two	Students participate in a game that simulates the impact that invasive species can have on an ecosystem. <i>Subject Content:</i> Invasive species, biodiversity, ecosystem dynamics, data collections/analysis, interrelationships	Upper Elementary & Middle	Science & Physical Education	Spring Summer Fall
Arctic Survivor	Students take on the roles of polar bears & their efforts to meet their habitat requirements of food, water, shelter and space. <i>Subject Content:</i> Habitats, limiting factors, disturbances, climate change, recording data	Upper Elementary & Middle	Science & Math	Year-round
White-nose Wipeout	This activity demonstrates the importance of bats and the devastating effects of the White-nose Syndrome on bat populations. <i>Subject Content:</i> Living things, bats, disease, population dynamics, human impacts	Upper Elementary & Middle	Science	Year-round
Deer in the Yard	In this simulation students become white-tailed deer to investigate some of the species' key adaptations for winter survival. <i>Subject Content:</i> Adaptation, ecosystem concept (carrying capacity, limiting factors)	Elementary, Middle & Secondary	Science & Physical Education	Winter
Migration Headache	This entertaining game simulates the spring and fall migration of many of our shorebird and waterfowl species. Students will experience in concrete terms many of the elements of population dynamics and	Upper Elementary, Middle & Secondary	Science	Year-round

Resource Title	Synopsis	Curriculum Connections		
		Grade Level	Subject Area	
	the importance of habitat conservation. <i>Subject Content:</i> Migration, habitat loss, population dynamics, human impact			
Macro invertebrate Mayhem	In a relay-style game students are introduced to the diversity of macroinvertebrate species & the detrimental effects of human activity on this diversity. <i>Subject Content:</i> Aquatic invertebrate diversity, water quality, aquatic ecosystems, human impact, stewardship	Middle & Secondary	Science	Spring Summer Fall
The Carbon Dioxide Game	This simulation demonstrates the greenhouse effect by showing how CO2 in the atmosphere traps heat and insulates the Earth. <i>Subject Content:</i> Greenhouse gases, global warming, anthropogenic climate change	Middle & Secondary	Science	Spring Summer Fall
Climate Change Dodge ball	In this game students simulate how increasing levels of greenhouse gases heat up the Earth. <i>Subject Content:</i> Greenhouse gases, global warming, climate change mitigation.	Middle & Secondary	Science	Spring Summer Fall