

Land-Based Learning in Kindergarten

The title page appears on screen. Bright, colorful shapes overlap and shift. Upbeat music plays in the background throughout the video.

Text on screen: Ontario Science Centre; An Agency of the Government of Ontario

Animated graphics swipe away to reveal a title card with playful geometric shapes.

Text on screen: Land-Based Learning in Kindergarten

Animated graphics sweep away again to reveal Jessica. She is standing in a craft room. There is a whiteboard on an easel beside her. On the whiteboard is a drawing of a plant, showing it both above and below ground, with the sun shining in one corner and a bee flying towards the plant. On a table in front of Jessica are colourful craft supplies.

Overlaid text on screen: Jessica (she/her) Early Childhood Programming Specialist, Ontario Science Centre.

Jessica: Hello, I'm Jessica Shearer, Early Childhood Programming Specialist with the Ontario Science Centre. In previous videos, we have looked at communication, play and the growth mindset. In this video, we welcome our friends from the Moccasin Identifier to explore how to incorporate Indigenous ways of knowing as part of STEM in the Kindergarten classroom.

Moccasin Identifier is a First Nation-led organization dedicated to increasing awareness and understanding of Indigenous Treaties and history across Canada. We are pleased to directly highlight First Nations voices and perspectives as part of this conversation. And now, let's hear from Tamara about STEM and First Nations Ways of Knowing.

Animated graphics sweep away again to reveal Tamara. She is wearing an orange "Every Child Matters" t-shirt, and a blue ribbon skirt.

Overlaid text on screen: Tamara (she/her) The Moccasin Identifier

Tamara: Aaniin, Hello. My name is Tamara Cochrane, and I am an Anishinaabe Kwe, or Anishinaabe woman, from the Mississaugas of the Credit First Nation. Our Nation is located in what is now known as Southern Ontario, on the traditional territory and Treaty lands of the Mississaugas of the Credit.

We see an aerial view of the Toronto skyline.

Tamara: The Anishinaabe are one group of Indigenous peoples here in Canada, or the original inhabitants of the land now known as Canada. Indigenous peoples include many distinct groups of First Nations, Inuit and Metis peoples.

Tamara arranges things found in nature, including birds' eggs, pinecones, an animal pelt, and animal skulls on a table. She places beaded moccasins alongside the items. Another Indigenous educator comes to help Tamara assemble the lesson.

Tamara: I am an Education and Training Advisor for the Moccasin Identifier, a Treaty education initiative. At the Moccasin Identifier, we want all Canadians and visitors to Canada to know

about First Nations peoples.

We want people to appreciate how long First Nations have lived here and that we are still here today.

Tamara shows a group of children a beaver skull; her colleague holds up an animal hide while the children raise their hands; the children examine birds' eggs with magnifying glasses.

Tamara: We aspire to share our history, stories and perspectives on Treaty; the agreements made between the people and the land the people share.

We see a close-up of a beautifully beaded moccasin then we see Tamara holding up copies of moccasin colouring pages for the children.

Tamara: The Moccasin Identifier uses the image of the moccasin as a symbol of First Nations presence and Treaty relationships across the land.

An orange shirt is seen on a fence, then we see a First Nations "dreamcatcher".

Tamara: Many educators and students learn about First Nations through events such as Orange Shirt Day or Indigenous Peoples Day.

Tamara leads a group of children into a school.

Tamara: The Moccasin Identifier strives to increase awareness and discussion of First Nations beyond these special events.

Once inside, the children take a seat on the classroom floor around Tamara.

Tamara: In doing so, we hope that everyone will know whose land they are on and that 'We are all Treaty People'.

Tamara guides a group of children in preparation of a stenciling lesson; then we see Tamara and the children outside preparing to create their art on the pavement of the school yard.

Tamara: This video will guide you through a land-based discussion and demonstrate acts of Treaty that can be achieved by Kindergarten students, including activities that will foster students' connections to the land and to each other using First Nations perspectives.

Animated graphics swipe away to reveal a title card with playful geometric shapes.

Text on screen: Choosing a location

Animated graphics sweep away to reveal Tamara leading the children outside. They kneel together in a circle on the pavement of the school yard, with paint trays and rollers in front of each child.

Tamara: Before you start the conversation with students, choose an appropriate location for a land-based discussion. Take your students to a safe and comfortable place where you can sit together in a circle.

An educator and her students sit on the grass in the shade under a tree.

Tamara: Maybe it's the schoolyard, a park, green space, or a small, wooded area nearby.

A group of children gather in a circle on the classroom floor around Tamara. Another Indigenous educator helps Tamara with the lesson. They pass around moccasins for the children to look at.

Tamara: If the activity must be done indoors, you can choose the classroom, school library, gym or other safe space.

Tamara's colleague is holding an animal pelt. He explains something to them; they all raise their hands, including Tamara.

Tamara: Ask your students: What is the significance or importance of a circle? What do you think happens when we sit in a circle? The circle holds deep significance within First Nations cultures. It reflects the concept that everyone is equal, and all voices are valued.

The children examine various animal pelts with magnifying glasses.

Tamara: The circle becomes a space for reflection, discussion, storytelling, and connection with oneself, one another, and the land.

The group continues to admire the moccasins and pelt and raise their hands with questions. Tamara points to each child with a raised hand and answers their question.

Overlaid text on screen: A1.1 listen and respond

Tamara: In the circle, students learn not only by speaking but by listening carefully and respectfully. By gathering in a circle, you model a First Nations approach to learning that emphasizes relationship, reciprocity, and community.

Animated graphics swipe away to reveal a title card with playful geometric shapes.

Text on screen: Land Acknowledgement

Animated graphics sweep away to reveal an aerial view of the Canadian flag flying over Parliament Hill in Ottawa.

Tamara: Before beginning this activity, ask your students: 'Whose land are we on?'

We see an aerial view of a colourful autumn forest, then three moose crossing a remote road.

Tamara: For thousands of years — and still today — First Nations Peoples have lived on and cared for this land. Land Acknowledgements, shared in many places from schools to sporting events, recognize the First Nations on whose traditional territories we live, work and play on.

We see a sunset view of Niagara Falls.

Tamara: They remind us that agreements were made between First Nations and settlers to share the land, care for it and care for each other.

We see a snowy wilderness trail.

Tamara: Land Acknowledgements also remind us that the land has a history and that we all have a responsibility to learn that history and about our roles within Treaty relationships.

Two educators take a group of children on a nature walk through a forest.

Tamara: Educators play an important role in helping students understand that Treaty relationships continue today.

An educator lets a child play with her braided hair while she kneels in front of another child and shows him a wildflower.

Tamara: By creating space for these conversations, teachers become partners in building awareness, respect, and understanding within their classrooms and communities.

An educator kneels in a meadow surrounded by his students. They are learning about Indigenous plants.

Overlaid text on screen: Tip: Your board's Indigenous Education Lead may be able to share an approved Land Acknowledgement and assist with questions.

Tamara: When discussing a Land Acknowledgement with your students, take time to explore why it is spoken, whose territory it refers to, and what responsibilities it brings to all of us as Treaty people. This helps ensure that a Land Acknowledgement is connected to meaningful learning and action.

Animated graphics swipe away to reveal a title card with playful geometric shapes.

Text on screen: Grounding Activity

Animated graphics sweep away to reveal Tamara and a group of children having a lesson outdoors in the winter. They examine stone, pinecones, and snow with magnifying glasses.

Tamara: Now, let's take some time to connect to the land. One way to connect to the land is with a grounding activity that includes a discussion of how the land takes care of us and how we are responsible to care for it in return. This activity can help students understand that their actions can have positive or negative impacts on the environment.

Tamara joins her group of students at the table set up with items from nature; they examine various items with magnifying glasses.

Tamara: To begin, ask your students the following questions:

What do we hear?

What do we see?

What can you smell?

What can you touch?

How does being here make you feel?

Tamara shows a beaver skull to the group.

Tamara: After each question, take a moment for students to pause, observe and provide their answers.

Overlaid text on screen: Tip: Record students' answers and refer to them as examples of key curriculum connections such as B13. Exploring Environments and D23. Respect and Care for Nature.

Tamara: As students do this, they see how they are active participants in a relationship with the land, one that requires care, respect and reciprocity. They develop positive associations with the land and are encouraged to listen and learn its lessons.

An Indigenous educator helps Tamara with the winter outdoor lesson as the children continue examining objects with magnifying glasses.

Tamara: This First Nations perspective and foundational understanding fosters empathy, responsibility, and a sense of stewardship — showing students that they are not separate from nature but deeply connected to it. The land is our family.

Animated graphics swipe away to reveal a title card with playful geometric shapes.

Text on screen: Our Responsibility to the Land and to Treaty

Animated graphics sweep away to reveal a family of four going for a walk through the woods; then we see children working in pairs to plant young trees.

Tamara: As a family what happens to the land also happens to us, the people living in relationship with it.

Overlaid text on screen: D20.1 understand that everyone belongs to multiple groups and communities, and that these groups and communities together shape Canadian identity

Tamara: We are all stewards of the land and everything we do has an impact.

We see an aerial view of the Thousand Islands in the St. Lawrence river.

Tamara: Here in Ontario, we all live on First Nations Traditional Territory and Treaty Lands. Canada has made many promises to First Nations people.

Tamara continues her winter outdoor lesson, aided by her colleague.

Tamara: Inform your students that everyone has a shared responsibility to care for the land, the waters, the plants, the animals — and one another. For this reason, we are all able to call Ontario our home and are equally responsible for upholding the Treaty relationships.

At the Moccasin Identifier, we refer to this concept as ‘We are all Treaty people.’
You can discuss this concept by asking your students the following questions:

Text appears full screen, as spoken by Tamara.

Tamara: What are some examples of how the land takes care of us?

What are some things we can do to take care of the land?

What would happen if we were not good friends with the land?

How would it make the land feel if we were not good friends with the land?

How would it make us feel if we were not good friends with the land?

Tamara continues her winter outdoor lesson, aided by her colleague. The children have fun with their magnifying glasses by examining at everything around them and asking questions to their educators.

Tamara: These observations are also part of early STEM learning. Students are practicing skills such as observation, pattern recognition, and asking questions about the natural world.

Overlaid text on screen: D23.3 describe ways in which they care for and respect the environment

Tamara: Familiarize your students with this shared responsibility to care for the land, waters, plants, animals and each other.

A group of children dig a small hole in a meadow and plant a wildflower.

Tamara: We take care of the land — and the land takes care of us. Being a Treaty person means understanding this responsibility and continuing to examine the role we each play, today and into the future.

Animated graphics swipe away to reveal a title card with playful geometric shapes.

Text on screen: Truth and Reconciliation Require Action

Animated graphics sweep away to reveal Tamara speaking to us from a classroom.

Tamara: Truth and Reconciliation is more than just recognizing the past — it’s about taking meaningful, ongoing action in the present and the future. As educators, we play a critical role in shaping how future generations understand truth, fairness, and responsibility within our Treaty relationships. Our actions — even small ones — can support healing, understanding, and a more inclusive future.

Tamara holds binoculars at a window with a group of children. As the children point, Tamara looks outside through the binoculars. The children continue to point to things for Tamara to check.

Tamara: For young learners, Truth and Reconciliation in practice starts with land-based learning just like the grounding activity in this video. Land-based learning is a powerful way to build

respect and connection and is considered an act of Treaty. Helping students build respectful relationships with First Nations Peoples, the land and each other can be practical implementations of Truth and Reconciliation.

Tamara, her colleague, and the children are outside in the schoolyard cleaning up after their stenciling lesson. Students raise their hands as Tamara and her colleague teach in the classroom.

Tamara: Truth and reconciliation can also be accomplished through other acts of Treaty, like picking up litter,

A group of older children pick up litter in a park

Overlaid text on screen: Acts of Treaty

Tamara: planting native plants or visiting Moccasin Identifier installation sites

We see a child using a watering can to water a vegetable garden

which reflect Treaty relationships within your students' communities.

Students raise their hands as Tamara and her colleague teach in the classroom.

Tamara: Reminding students they are part of the land, not separate from it.

Tamara holds a picture book in front of a group of children sitting on the classroom floor while her colleague holds up moccasins and a pelt for the children to see.

Overlaid text on screen: Tip: Record students' answers as examples of the curriculum connections: D20. Understanding Perspectives and Canadian Identity, D23. Respect and Care for Nature and C14. Social Skills.

Tamara: When engaged in Acts of Treaty, consider asking your students questions, like *"What promise can we make to take care of the land?"* or *"How can we be a good friend or neighbour to others?"*.

Also, key is using authentic First Nations resources in your discussions.

Overlaid text on screen: D20.3 demonstrate respect for different perspectives and identify areas of connection

Tamara: This means choosing stories and activities created by First Nations authors and Knowledge Keepers, like the Moccasin Stenciling activity we'll share in the next section of this video.

Tamara is explaining the Moccasin Stenciling activity to the children in the classroom.

Tamara: These choices give students the chance to hear First Nations voices and perspectives directly.

Reconciliation is an ongoing practice.

An educator teaches her students about herb plants. She has a basil plant out of its pot and is explaining the importance of its root system.

Tamara: By learning, listening, and taking thoughtful action, educators help students understand and take action in their role as Treaty people.
It's about doing better every day.

A young woman is reading on her laptop and taking notes.

Tamara: As educators, we don't need to have all the answers, but we do need to be willing to take the steps forward —

Two children plant seeds in patchy soil.

Tamara: for our students, for our communities, and for the shared future we're helping to shape.
Every action matters.

Animated graphics swipe away to reveal a title card with playful geometric shapes.

Text on screen: Moccasin Stenciling / Colouring Activity

Animated graphics sweep away to reveal Tamara, her colleague, and their students outside in the school yard getting ready for their stenciling lesson. They help the children by holding down the stencil while the child applies the paint with a small roller.

Tamara: When implementing Acts of Treaty in the classroom, engage students through culturally meaningful, age-appropriate activities. The Moccasin Identifier's educational resources offer a moccasin stenciling or colouring activity as an example. The moccasins are a powerful symbol of connection to the land and to First Nations Peoples.

Tamara and her colleague are seated on the floor of the classroom and show the students different moccasins. Each child has a magnifying glass to closely examine the moccasins.

Tamara: For generations, moccasins have been a part of everyday life for First Nations. Each pair tells a story — of movement, survival, family, ceremony, and connection to the land.

We see a close-up of a beaded moccasin.

Tamara: They reflect knowledge of how to live in balance with nature, using materials from the land with care and intention.

Tamara, her colleague, and their students continue their lesson seated on the floor of the classroom; Tamara holds out a fur pelt for the children to touch.

Tamara: Traditionally, everything that makes a moccasin comes from the land such as leather, fur, porcupine quills and shells.

Children run across an open field.

Tamara: Moccasins allow us to walk on Mother Earth respectfully and remind us of our responsibilities as stewards of the land.

A group of children colour in copies of the moccasin drawing with Tamara.

Tamara: They reflect First Nations relationship to the land and represent First Nations culture, diversity and resilience.

The children continue their moccasin stenciling in the classroom.

Overlaid text on screen: D25.2 experiment with different materials, techniques, and processes used in a variety of art forms

Tamara: Students who stencil or colour moccasins have a visual reminder of these important teachings we have discussed throughout the video.

Each child shows their completed moccasin stencil to the class.

Tamara: Their moccasins represent their own connections and promises to the land. The process invites them to reflect on their place in the world and the enduring presence of First Nations communities across Turtle Island or North America.

We see four unique drawings of moccasins on a table.

Tamara: Consider researching moccasin designs from First Nation Peoples within your geographic area.

Tamara passes out copies of the moccasin drawings for the students to colour.

Provide images of local designs to your students.

Overlaid text on screen: B12.2 make predictions and observations while exploring, investigating, and designing

Tamara: Extend this activity by including a lesson in which students identify and/or describe the differences and similarities of moccasins from First Nation Peoples across Ontario.

Tamara begins to colour in a moccasin drawing as the children do the same.

Tamara: This simple, hands-on activity becomes much more for students.

Children make stencils of moccasins in the classroom and then the children and Tamara hold up their finished moccasin stencils proudly.

Tamara: It is a symbol of Treaty relationships-a promise to walk gently on the land-and our connection to the land. A reminder that 'We are all Treaty people'.

Animated graphics swipe away to reveal a title card with playful geometric shapes.

Text on screen: Conclusion

Animated graphics sweep away to reveal Tamara speaking to us from the classroom.

Tamara: The Moccasin Identifier reminds us that these teachings belong in everyday lives as part of your learning journey, not only on special days or events.

We hope that you remember the land is our teacher, our family and we all have a role to play in these Treaty relationships.

Thank you for learning, sharing, and caring today.

We are all Treaty people.

Miigwetch. Thank you.

Animated graphics sweep away to reveal text.

Text on screen: We hope you enjoyed this video, which is part of a series developed to support Ontario's kindergarten teachers in STEM education.

Be sure to check out other videos in this series along with additional classroom-ready resources and professional learning resources at OntarioScienceCentre.ca.

Animated graphics sweep away to reveal text.

Text on screen: Ontario Science Centre; An Agency of the Government of Ontario