**Integrating Indigenous perspective in Early Years Science**

**Exploring Land as Teacher**

**A Conversation with Leslie Wakeman**

Leslie Wakeman is currently the Program Leader for Socially Responsible Citizenship at Sunrise School Division. She has thirty three years of classroom and counselling experience in the early and middle years. After many workshops and consultations with elders, and administration, she, along with five teachers in two schools, developed an *action research project* to explore ways to integrate Indigenous perspective in early year’s science. Leslie shares some of the thinking around the project and offers insight for other teachers to consider.



**Planning Principle**

**As teachers, start by asking yourself “what attitudes and ideas do I bring to the table? How comfortable am I in a holistic, student led learning environment? What resources are at my disposal? What supports can I access?**

**Elders?**

**Community organizations? Administration?”**

We asked ourselves “How can we support

students for success? What validates and

uplifts them to do well? How can we

work with the land as teacher? We know that

when students are out on the land, it

supports mental health and wellbeing, it is

freeing…it is fun.

The ELA curriculum asks us to see

*land as text* so we wanted to explore

that idea. We took the opportunity to ask

“What if the trees could actually speak to us?

What are the trees waiting to teach us?”

We used the medicine wheel as a guide.

**Planning Principle**

**-Create an idea rich environment through activity and artifacts pertinent to the ideas being explored. -Encourage and support personal and collective questions.**

**-Work to create an environment of trust.**

**-Document student engagement and questions to inform planning.**

Considering the mental, physical, emotional

and spiritual aspects of the learning

experience provided a holistic framework

that considered the whole child and

supported our planning as we worked

through the relevant science outcomes.

Creating a space of ‘*perceived freedom’*

was essential. We knew we wanted to work

in a safe space where students were free to

explore, and to engage in inquiry and

conversation. We worked to create an idea rich environment through activity and tactile exposure to artifacts.

Personal and collective questions were encouraged. We took notes and photographs to inform our future planning.

Involving the administration was critical.

**Planning Principle**

**-Involve administration in planning.**

**-Allow time for students to process and articulate experiences.**

They supported us in creating authentic,

outdoor learning experiences. Moving

outdoors and letting the students experience

freedom to question and experiment changed

the teacher/student relationship to learning.

We had to be patient and allow students

the time to process and articulate their

experiences with the land.

**Planning Principle**

**-Invite student observation and questions. Allow them to drive the learning.**

**-Notice and affirm student engagement with knowledge, as well as social understandings and connections.**

We organized an initial teaching but we soon

began to recognize when the children started

to live with that teaching. After a while, they

began to drive the process. We worked to notice

and affirm their learning. The learning was often

social and emotional as well as cognitive

and spiritual. The sophistication of their questions

and meaning making surprised us on many

occasions. It was often well beyond their years

and illuminated a deep connection to the focus of

study; the land and the trees.

**Planning Principle**

**-Use story to teach and to assess understanding.**

**-Slow down to allow for personal connections to be experienced.**

Story was a powerful tool in the process. We

taught through story and the students

expressed their thinking and meaning making

through story. We were challenged to trust

different ways of knowing. Feeling the pull of

action, we were sometimes challenged to

take the time to acknowledge the spiritual but

as we progressed, it began to feel more natural.

Our plan was flexible and invited participant input.

Assessment was built in to the overall plan.

It was scheduled at appropriate times and

**Planning Principle**

**“Show me what you know?”**

**-Consider a wide range of assessment tools that demonstrate understanding of content and engagement with process.**

**-Assessment informs planning**.

included evidence of questions and wonderings.

We captured video of students discussing

and answering questions about the process

and products of their investigations.

“Show me what you know?” invited the

children to express their understanding in

meaningful ways. We made observations

of engagement and process. This provided us

with regular evidence of student learning and

provided a well-rounded picture of progress.

It also informed the planning and pacing of

the learning experience.

**Planning Principle**

**-Teachers develop by examining their own practise.**

**- Be prepared to feel challenged during the process**

**-Grow at your own pace.**

During this project, we were learning along

with our students. This often challenged us

as teachers. It took us out of our comfort

zones and stretched our pedagogical

knowledge. Working in an Inquiry driven

environment does require a shift from common

practise and positions the teacher differently

in relation to student learning. This can be exciting

and challenging at the same time. My advice to

teachers who want to try some action research

of their own is to be kind to yourself. Give yourself

time to start gently and grow at your own pace along with your students.

Concluding Remarks

At the end of our project students were asked two questions: What did the trees teach you? And If the trees wanted us to know one thing what would it be? A student whose mom passed away in the spring and who lives with a cognitive delay said that the trees hug him and sing to him. A student who was living with domestic violence said that the trees told him “You’re safe”. Another student said the trees told her that “We stand strong and tall no matter what. We live in groups.” Another student, during a science experiment intuited that lichen grows on fungus on trees. In fact, it does and it is a symbiotic relationship. She is 6 years old. No one had taught her about fungus and lichen.

Honestly, everything the trees told the children was founded in science and positive identity. *The Nature of Things: What Tress Talk About* confirmed many of the things the students observed. The book *The Secret Life of Trees: How They Live and Why* *They Matter* also reflected what the Grade 1 and 2 students said they heard the trees say. I find this fascinating and I am inspired to work more with students, our Elders and land as the teacher.

CBC The Nature of Things : What Trees Talk About

<https://www.cbc.ca/natureofthings/episodes/what-trees-talk-about>

Tudge ,C ( 2005) The Secret life of trees: How they live and why they matter. London, England,

Penguin Books.

<https://www.amazon.ca/Secret-Life-Trees-Penguin-Science-ebook/dp/B002RI9O8M>