



Community Science

Lesson 3: Indigenous knowledge in community science

Duration: 1 hour **Location:** Indoors

Overview

In this lesson students will:

Consider the valuable role of indigenous knowledge in science. They will think about the ways in which oral story telling can contribute to scientific records, discover winter counts as a method of record taking, and create their own winter count symbol.

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Learning objectives

By the end of the session, students will be able to:

- Discuss the ways in which oral story telling can contribute to scientific knowledge and records.
- Describe alternative methods of record keeping, such as winter counts.
- Respect and value multiple perspectives in science.

Curriculum links

Social studies (all ages)

Values and attitudes:

- appreciate and respect how multiple perspectives, including Aboriginal and Francophone, shape Canada's political, socioeconomic, linguistic and cultural realities
- value the diversity, respect the dignity and support the equality of all human beings

Knowledge and understanding:

- understand the diversity of Aboriginal traditions, values and attitudes

Equipment required

- PowerPoint Presentation



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- Speakers
- Winter count activity sheet
- Tea-stained paper (for optional extension)

Additional information

A special thank you to Clarence Wolfleg for sharing his knowledge of oral storytelling and winter counts.



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Lesson plan

Time	Activity	Equipment needed
10 mins	<p>Oral story telling</p> <p>Listen to the story of the Granddaughter who was Eaten by a Big Fish on slide 2.</p> <p>Note: Stories are an integral part of the indigenous world view, and should not be classed as myths or superstition. Stories are usually told for a specific reason and not just for entertainment, and should always be treated with respect.</p>	<ul style="list-style-type: none">• PowerPoint presentation and speakers
10 mins	<p>Ask the class:</p> <p>Why is story telling so important? (slide 3)</p> <p>Stories are not just for entertainment but help us to learn and connect with the land. Story telling is a primary teaching aid for many First Nations people.</p> <p>How can oral stories contribute towards scientific data? (slide 3)</p> <p>Lead a class discussion for this question.</p> <p>Storytelling helps to keep history alive and passes information from one generation to the next. Oral story telling can give us an indication of the climate, weather patterns, wildlife, and influences upon the land before official record keeping began. The need to value the knowledge and traditions of people who have lived in this land for a very long time.</p> <p>You many also wish to discuss the narratives of First Nations stories.</p> <p>Narratives are often non-linear, can be on-going and carried over through a long period of time. Elders will often tell stories in a way which encourages the listener to think about the story and the meaning. Repetition is a very important feature.</p>	<ul style="list-style-type: none">• PowerPoint Presentation



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10 mins	<p>Show the image on slide 4 – what do you think this is a picture of? This is a winter count – a pictorial calendar. Each winter, one significant event was recorded by adding a symbol. The count begins in the middle, and circles outwards.</p> <p>The winter count shown on slide 4 was interpreted by elder Bull Plume and missionary Canon William Haynes (a missionary working with the Piikani in 1912), It recorded some of the following events: “Five years into the Winter Count, they tell of the berries staying on the trees all winter. The Winter Count also has years when there was hail and thunder in the winter, and the deer and buffalo got stuck in deep snow. In other years the buffalo and antelope got sick following an eclipse, and strong winds were recorded as a significant event.</p> <p>Studying winter counts can give us an indication as to the weather, climate and changing environmental conditions, before official records began in Canada. These are valuable contributions as we study and research climate change.</p>	<ul style="list-style-type: none">• PowerPoint Presentation
30 mins	<p>Challenge students to create their own winter count symbol.</p> <p>Think about the most important thing that has happened to you, your family or your community since the first snowfall of last winter. Maybe you moved house, welcomed a new sibling, or travelled to a new place. Choose one event as a reminder of the year and draw a symbol to represent this on the activity provided.</p>	<ul style="list-style-type: none">• Winter count activity sheet
OPTIONAL EXTENSION	<p>Optional: You could create a class winter count. Once students have designed their winter count symbols, ask them to draw this on a tea-stained piece of paper to represent an animal hide. Collect the symbols together, by placing one in the middle and adding other by working outward in a spiral.</p>	<ul style="list-style-type: none">• Tea-strained paper (optional)



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