

Powwow Counting Picture Book Lesson
 Created by Peter Le, 2020 Werklund Graduate

Peter Le is a K-12 Mathematics teacher passionate about contextualized, relevant, and meaningful learning experiences for all students through multiple forms of teaching. He has worked across various fields and disciplines including Sciences, Technology, and ELL, with diverse demographics. Recently, Peter has worked through a Two-Eyed Seeing approach with Indigenous communities, mentors, and elders, in coordinating and planning events, workshops, and STEAM activities in robotics over the summer.

Resource: Picture Book	<p>Powwow Counting</p> <p>By: Penny M. Thomas (Author), Melinda Josie (Illustrator)</p>
Picture Book Description	<p>In this simple counting book, young readers and listeners learn how to count to ten in Cree. First each number is introduced and then the number is used in a sentence to describe a Powwow. The E-book version even includes narration in-browser from the library and the book concludes with a summary and pronunciations of all of the numbers. This unique counting book introduces Cree numbers, from one to ten. Featuring powwow imagery that reflects the rich culture and tradition of the Cree people, rhyme, rhythm, and glowing illustration combine to make language learning a joyful experience for young readers. A pronunciation guide is included in the back of the book.</p>
Author/creator and/or literature background	<p>Author:</p> <p>Penny M. Thomas is of Cree-Ojibway background, a First Nations advocate and works in psychology and therapy.</p> <p>Melinda Josie is a Toronto-based artist and illustrator.</p>
UPE course connections	<p>Educ 435- This text explores a different way of expressing the meaning of a concept (i.e. the various ways to express the numbers '1-10' in a different language, different ways to describe/explain/represent the numbers/ and feel the numbers. For lower grades, this would tie in with encoding and decoding, and make meaning. It is a great source for examining oral language, and basic literacy/numeracy development within a culturally relevant pedagogy.</p> <p>Educ 450 – This text can help pre-service teachers simple ways of exposing students to different cultures and languages, and the similarities between them. Since this lesson targets younger students, it presents a great opportunity to help students appreciate and demonstrate sensitivity towards individual and cultural differences. This lesson is a good example of incorporating Indigenous knowledge, culture and or language into lesson plans for the program.</p>

	<p>Educ 460/535 - Integrating the Cree language with Math is an effective way of increasing language learning (and how they are interconnected). In the PoS- this text addresses the concrete, and visual aspects) of the natural number system. Since this lesson targets a younger audience, it is a great example of exploring math through integration of culture and a different linguistic approach to numbers.</p>
<p>K-12 connection</p>	<p>Pre-Kindergarten to Grade 1: Students will be introduced to Cree language through counting numbers 1-10. This will help them share factual information about their surroundings and be introduced to Cree language and culture, exploring a different approach to numbers, while reinforcing the natural numbers system.</p> <p>The picture book is a great book for young students. It has beautiful illustrations and clearly displays the amount of things associated with the number. And the numbers are written in the Cree language which is big and clear to read (also includes pronunciation).</p> <p>Math Kindergarten Develop number sense: 1.Say the number sequence 1 to 10 by 1s, starting anywhere from 1 to 10 and from 10 to 1. 2.Subitize (recognize at a glance) and name familiar arrangements of 1 to 5 objects or dots. 3.Relate a numeral, 1 to 10, to its respective quantity. 4.Represent and describe numbers 2 to 10, concretely and pictorially. 5.Compare quantities 1 to 10, using one-to-one correspondence.</p> <p>Patterns and relations 1. Demonstrate an understanding of repeating patterns (two or three elements) by: • identifying • reproducing • extending • creating patterns using manipulatives, sounds and actions.</p> <p>2. Sort a set of objects based on a single attribute, and explain the sorting rule.</p> <p>Space and Shape 1. Use direct comparison to compare two objects based on a single attribute, such as length (height), mass (weight) or volume (capacity).</p> <p>Grade 1 Develop number sense:</p>

1. Say the number sequence 0 to 100 by:
 - 1s forward between any two given numbers
 - 1s backward from 20 to 0
 - 2s forward from 0 to 20
 - 5s and 10s forward from 0 to 100.
2. Subitize (recognize at a glance) and name familiar arrangements of 1 to 10 objects or dots.
3. Demonstrate an understanding of counting by:
 - indicating that the last number said identifies “how many”
 - showing that any set has only one count
 - using counting-on
 - using parts or equal groups to count sets.
4. Represent and describe numbers to 20, concretely, pictorially and symbolically.
5. Compare sets containing up to 20 elements, using:
 - referents
 - one-to-one correspondenceto solve problems.
6. Estimate quantities to 20 by using referents.
7. Demonstrate an understanding of conservation of number.
8. Identify the number, up to 20, that is:
 - one more
 - two more
 - one less
 - two lessthan a given number.
9. Demonstrate an understanding of addition of numbers with answers to 20 and their corresponding subtraction facts, concretely, pictorially and symbolically, by:
 - using familiar mathematical language to describe additive and subtractive actions
 - creating and solving problems in context that involve addition and subtraction
 - modelling addition and subtraction, using a variety of concrete and visual representations, and recording the process symbolically.
10. Describe and use mental mathematics strategies for basic addition facts and related subtraction facts

Patterns and relations

1. Sort objects, using one attribute, and explain the sorting rule.

	<p>2.Sort 3-D objects and 2-D shapes, using one attribute, and explain the sorting rule.</p> <p>Space and Shape (measurement) 1.Ordering objects and matching</p> <p>Social Studies</p> <p>K.1.3 examine what makes them unique individuals by exploring and reflecting upon the following questions for inquiry: • How do culture and language contribute to my unique identity?</p> <p>1.1.3 examine how they belong and are connected to their world by exploring and reflecting: • What helps us to recognize different groups or communities (e.g., landmarks, symbols, colours, logos, clothing)?</p> <p>1.2.1 appreciate how stories and events of the past connect their families and communities to the present: • appreciate how the languages, traditions, celebrations and stories of their families, groups and communities contribute to their sense of identity and belonging</p> <p>1.2.2 analyze how their families and communities in the present are influenced by events or people of the past by exploring and reflecting upon the following questions for inquiry: What are some examples of traditions, celebrations and stories that started in the past and continue today in their families and communities?</p>
<p>Rational</p>	<p><u>Big Idea:</u> Overall, students will learn how to communicate with others, utilizing numbers 1-10 in their everyday lives.</p> <p>When learning numbers, students will be able to use numbers providing information, or gathering data through a hands on approach, helping develop core concrete and pictorial understanding.</p> <p>Incorporating language in the subject of math not only benefits the students to learn math, but also learn elements of the Cree language and culture, and bring their language knowledge out of the classroom and into their everyday lives.</p> <p>Subject: Math Keywords: Language, Counting, Numbers, Cree language, People, Culture</p>
<p>Materials</p>	<p>Powwow Counting Picture Book</p>

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	<p>E-Book: https://calgary.bibliocommons.com/item/show/1238087095</p> <p>10 sticks/popsicles for each pair of students in the class</p> <p>10 Unifix cubes per student</p> <p>Graph sheet for each student - see the lesson below</p>
Lesson Activities	<ol style="list-style-type: none">1. Start the lesson by saying Hello in Cree (Tanisi), while waving to each student. http://nisto.com/cree/lesson/1.html You will explain what this means shortly.2. Introduce the lesson and the book. Today we will learn/review how to count from 1- 10. Today we will read a book which teaches us how to count to 10 in Cree, as well as review counting in English. Ask if students know any Cree words and where they may have learned it. Remind students of the introduction of saying “Tanisi” and that everyone has heard this and knows it means ‘hello’.3. Show the cover to the students and read the title. Ask if students have heard of “Powwow” before, where they might have heard it, have they been to one? In Calgary these are easily accessible during the summer for Stampede, Indigenous day, Canada day, etc. Explain that “A powwow is a traditional gathering of people, often from other tribal groups or from far away, and involves dancing, singing, and ceremony” (Vermette, 2014). This is a very special gathering that certain First Nations have, Cree people are one group that have Powwows. At a Powwow, you get together, there’s lots of guests, food, music, dancing, and ceremonies. It is a very special day about celebrating connections. We will see a few things about the Powwow as we learn/review to count.4. As a class, have students share what and how they celebrate family, cultural or any sort of event with their families.5. Read the story or play the E-book for students. Make sure to explain the pictures on each page (Feathers, hair braiding, pretty dresses, eagles, etc, what the items are, and what they are used for, where you see them. After, discuss what students have learned about Cree celebrations- the Powwow.

Number	Cree Word	Syllabics
One	Peyak	ᐅᐱᐱ
Two	Niso	ᐱᐱᐱ
Three	Nisto	ᐱᐱᐱ
Four	Newo	ᐱᐱᐱ
Five	Niyanan	ᐱᐱᐱᐱᐱ
Six	Nikotwa'sik	ᐱᐱᐱᐱᐱᐱ
Seven	Tepakohp	ᐱᐱᐱᐱᐱᐱ
Eight	Enanew	ᐱᐱᐱᐱᐱᐱᐱ
Nine	Kekac Mitataht	ᐱᐱᐱᐱᐱᐱᐱᐱᐱ
Ten	Mitatahtmeh	ᐱᐱᐱᐱᐱᐱᐱᐱᐱᐱ

<https://creeliteracy.org/wp-content/uploads/2017/08/creenumbersprintable.png>

6. Teach numbers 1-20

Review the numbers 1-10 again- in English and Cree, if students are already comfortable, work with the class to write the numbers 1-10 on the board.

7. Popcorn number game: Number the students 1-5 in Cree.

Call out a number in Cree and those students who are that number, stand up and say the number then sit back down. Start the numbers in order and eventually start mixing the numbers up. Once the students feel confident with their numbers, try having the students say the numbers in order. I.e. every student with the number 1, all stand and say 1 in Cree, then group 2 stand and say 2, then group 3 stand and say 3, etc.

Once students are comfortable with 1-5, practice 6-10. And then 1-10 all together.

8. Students will practice by playing Kutepuchkunuputuk - The game of counting sticks, a Plains Cree game.

(<http://mathcentral.uregina.ca/RR/database/RR.09.00/treptau1/game1.html>)

Prepare 10 sticks for each pair, try to make them as identical as possible.

One player divides the sticks into two bundles. The other player needs to guess which bundle has more sticks by saying aloud the number they guess. If the player is wrong, the two switch roles. The object of the game is to

correctly guess four times in a row to win. Encourage students to count in Cree, or use English and Cree together.

Variations: In team play, opponents sit facing each other. Each member plays against only one opponent. If the guesser is correct, their team gets one point and the person next in line becomes the guesser. If they are wrong, the divider's team wins the point and the right to guess.

9. Measuring Activity:

Tell the class that each group will be responsible for measuring various items that are placed around the classroom. Students will use Unifix cubes and record the height on a bar graph by shading in the number of Unifix cubes.

Pair students and give each pair a handful of Unifix cubes and the bar graphs (provided at the bottom) to record the height of the assigned items using the Unifix cubes.

Afterwards, gather students and compare the graphs, and provide the actual measurements in Unifix cube units. I.e. The pencil is 10 cubes.

10. Scavenger hunt to find the syllabics in cree (optional activity- for more advanced students):

Post sticky notes around the room on items, where each sticky note has a number written on it as a syllabic in cree.

On the board, draw about 10 or so items in the form of an equation. I.e. Draw: $\text{Globe} + \text{Pencil Sharpener} + \text{Carpet} = ??$. $\text{Pencil case} + \text{Lamp} - \text{Bookshelf} = ??$.

Students either individually or in pairs, will search the classroom for the items, find the sticky note, and solve the math questions. Depending on student level, you can use addition, subtraction, or multiplication in the equations.

Additional: Create a class video together- to showcase counting in English and Cree: <https://www.youtube.com/watch?v=02PHMfA3RFM>

Reinforce everything learned today: Throughout the rest of the year, practice counting in Cree and other languages shared by your students whenever you can — during Calendar time, when passing out supplies, etc.

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	Item 1	Item 2	Item 3	Item 4	Item 5

Supporting Sources:

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