We all Count 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	We All Count: A Book of Cree Numbers By: Julie Flett
Picture Book Description	This picture book counts various indigenous and non-indigenous items in Cree and includes a Cree pronunciation guide at the beginning. Meant to explore connections between language, nature, and culture. The illustrations are beautifully captivating to the young reader's eyes.
Author/creator and/or literature background	Author & Illustrator: Julie Flett ● Cree-Metis author, illustrator, and artist ● Received many awards: ○ 2017 Governor General's Award for Children's Literature for her work on *When We Were Alone* by David Robertson ○ 2016 American Indian Library Association Award for Best Picture Book for *Little You* by Richard VAn Camp ○ Three-time recipient of the Christie Harris Illustrated Children's Literature Award for *Owls See Clearly at Night; A Michif Alphabet,* by Julie Flett, *Dolphin SOS,* by Roy Miki and Slavia Miki (Tradewind Books), and *My Heart Fills with Happiness,* by Monique Gray Smith https://www.julieflett.com/
UPE course connections	Educ 435- This text explores different ways of expressing the meaning of a concept (i.e. the various ways to express the number '1' in different languages, different ways to describe/explain/represent 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. Educ 450 – This text can help pre-service teachers simple ways of exposing students to different cultures, 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. 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.

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	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.
K-12 connection	Pre-Kindergarten to Grade 2: Students will be introduced to the 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. For older students, have a look at cultural developments of different number systems from the different cultures throughout the history of numbers,and how they relate. While discussing the different number systems listed above, discuss the different forms, characteristics, and bases associated with each of them. Talk about how some of the simple arithmetic, such as addition and subtraction, is performed in each of the systems. Use visual aids as needed. See: http://kayliel.blogspot.com/2010/02/different-cultures-number-systems.html 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). For older students, they can share how to write/say numbers in their own culture. Also, the students will learn basic common greetings and introductions which will eventually lead to counting numbers. Integrating the Cree language into Math is an effective way of increasing language learning (and how they are interconnected). The more young students are surrounded by languages and the different ways to say/express the same thing, the more they are able to engage in language literacy and appreciate cultural diversity.
Rational	Big Idea: Overall, students will learn how to communicate with other people and utilize numbers in their everyday lives. When learning numbers, students will be able to use numbers when providing information (telling someone their age), or gathering data (ex. If a parent were to ask the child to pick their 5 favorite apples from the store, grab 7 eggs from the fridge, etc). Incorporating language in the subject of math not only benefits the students to learn math, but also learn elements of the Cree language, and bring their language knowledge out of the classroom and into their everyday lives. Subject: Math Keywords: Language, Counting, Numbers, Cree, Nature, Culture

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	General Outcome Develop number sense. **Specific Outcomes** • say the number sequence 1 to 10 by 1s, starting anywhere from 1 to 10 and from 10 to 1. [C, CN, V] • subitize (recognize at a glance) and name familiar arrangements of 1 to 5 objects or dots. [C, CN, ME, V] • relate a numeral, 1 to 10, to its respective quantity. [CN, R, V] • represent and describe numbers 2 to 10, concretely and pictorially. **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? (I, C)
Materials	We All Count: A Book of Cree Numbers by Julie Flett Option: Video of the book https://www.youtube.com/watch?v=1_ITapLk_UY Sing-Along counting 1-10 https://www.youtube.com/watch?v=zi2wmz_SxzI
Lesson Activities	1. Start the class with an introductions exercise. Teach the students the Cree translation of the following and when to use it: (Try to consult an Elder and a Cree individual to properly know pronunciation and translation. a. Hello- Tân'si. b. What is your name?- Tân'si kitisiyihkâson? c. My name is _____ (Cree:Nisihkason) **Note** Can teach more introduction greetings, and some math vocabulary for older students, but please consult a Cree educator if possible. 2. Students practice with a partner or the person beside them exchanging in dialogue (in Cree), greeting each other hello and asking each other's name. Student 1: Hello, what's your name? (Cree:Tân'si, tân'si kitisiyihkâson?) Student 2: Hello, my name is _____(Cree: Tân'si, nisihkason) (& vice versa, partners switch dialogue) 3. Lead the students through an echo practice of the numbers 1-10 in English using visuals (balls, pencils, drawings, etc.). Then explain to the students that they will be learning the numbers in Cree. Read *We All Count* picture book to the students. Have students repeat back the words in Cree and hold up fingers in the air at the same time. In this method, they have visual, auditory and kinesthetic ways of learning 4. Pick a sing-along song for students to sing. This is to further reinforce their learning. This YouTube video is a great example: https://www.youtube.com/watch?v=zi2wmz_SxzI

5. Once the students know numbers 1-10 in Cree, ask them this question in Cree: How old are you? Go around the class and ask each student their age, and they answer in Cree with holding their fingers up.
6. Now refer the students back to the introductions exercise. Explain to students to repeat the same exercise, but this time add in the question, “How old are you?”. Students will answer with their age number in English while holding up fingers. Show a demonstration to students.

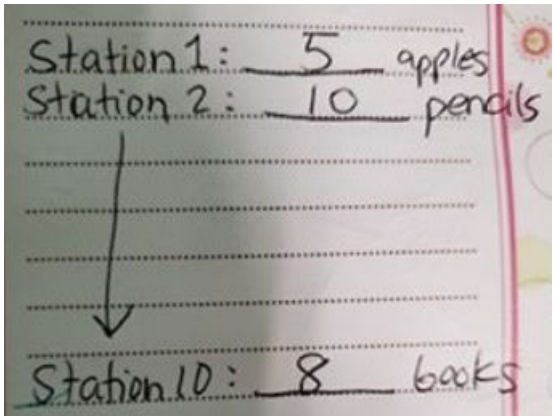
Student 1: Hello, what’s your name? (Cree: Tân’si, tân’si kitisiyihkâson?)
Student 2: Hello, my name is _____ (Cree: Tân’si, nisihkason)
Student 1: How old are you? (Cree: Tân´tahto e tahto piponeyan?)
Student 2: (answers their age number in Cree while holding up fingers)

This will help students use counting numbers in practical everyday use appropriate to their age.

Note: Explain to students the importance of learning numbers. Learning numbers can be used to know information and give information. That’s teaching them “How old are you?” is a great example for them to show that knowing your age is important. Reinforce this understanding by showing them that you can use numbers in everyday life such as money, food, time, people, etc. The next activities will help reinforce this concept.

7. Option 1→ Scavenger Hunt Game:
    a. Prepare a worksheet of a list of objects in the classroom for students to count. And have students write down the answer on the paper in Cree

8. Option 2 → Stations Counting Activity:
    a. Set up 10 stations around the class (may use desks for this). Each station will have different objects. Students will then split up into individual or group work (depending on class size), and go around the stations and write down in their worksheet how many objects are in each station. After, gather around as a class and check answers.



9. Option 3→ Count with Cups
    a. You need: 10 white paper cups (per student), 55 small objects such as gummy bears/ pasta (per student), marker, pen, etc
    b. Number the cups 1-10, make sure it's written visibly with a marker.
    c. Have student arrange the cups in order from smallest to biggest number
    d. Give students the 55 objects and ask them to see the number written on the cup and put that number of objects in the cup.
    e. When students are done, check each student and see if they put the right amount in each cup

If possible, invite a Cree elder or educator into the classroom to introduce students to Cree songs and stories- relating to counting, or basic math. Math Catchers at Simon Fraser University also provides stories and math problems in Indigenous languages: https://www.sfu.ca/mathcatcher.html

Supporting Sources:

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