

Continuing Learning

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Grade: 2

Category: Numeracy

Title of Lesson: Odds and Evens (Stick Guessing Game)

First Peoples Principles of Learning: Learning is holistic, reflexive, reflective, experiential, and relational.

Indigenous Competency:

Mental (skills/knowledge/thought)

Spiritual (sense of self and connection to others and the land)

Big Idea: Numbers to 100 represent quantities that can be decomposed into 10s and 1s

Content: Number concepts to 100 (even and odd numbers)

The Stick Game is a guessing game played by First Peoples all over Canada and the United States. It has a variety of names: Pesseníganar, Agitasoweni, Ateso'kaganani, Kinnahelah, Kin, Missolich, etc. Materials used depended on where it was played (straw, sticks, stones, etc.). There are many variations on how many pieces were used (always an odd number) or what was used to keep track of who won.

Materials Needed:

- 25 small sticks of the same length and similar width (or something that would be similar, e.g. straws, pencils, etc..)
- 10 small rocks (or 10 of the same object)

Task Instructions (step by step):

1—Go over what an even number is and what an odd number is. Even numbers are numbers that can be paired equally. Odd numbers are those that cannot be paired evenly. To practice take an even number of the sticks (i.e. 8) and ask your child to make piles of 2 with them. They should have 4 piles of 2 sticks each. If they all pair up then the

Continuing Learning

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number 8 is even. Do the same for an odd number (i.e. 13 sticks). Ask your child to pair the sticks up. They should have 6 piles of 2 sticks each and 1 stick by itself. If there is one not paired up then 13 is an odd number.

2—Two players are needed for this game. The players must sit facing each other. The first person to play gathers the sticks up into a bundle. Behind their back they divide the bundle into two. Their opponent picks which hand they think is the even bundle. They then take the bundle they have chosen and count the sticks. If the number is even they win this round and take one of the stones. If the bundle is odd then they lose and do not get a stone.

3—It is now the second players turn to divide the bundle and have their opponent choose which is the even one. Play continues until there are no more stones and the player with the most wins.

Adaptations/Adjustments:

This game can be played with any number of sticks as long as it is an odd number. To make it easier use less sticks (i.e. 11). To make it harder use as many as 101. In grade 2 students should be fluent in numbers to 100. Your child may figure out that counting in piles of 5s or 10s is a faster way to count how many they have.

Play as many rounds as you would like.

Play with a bundle of 29 sticks and have one stick as the dividing stick. To win a round the player must call out the odd number of sticks they are going to separate from the pile (9, 11, 13, 15, 17 or 19). They then throw the bundle down and quickly use the dividing stick to separate the sticks into their number. If they separated them correctly into the odd number they chose they win the round and play moves to the next player.

More games can be found at <http://mathcentral.uregina.ca/RR/database/RR.09.00/treptau1/> or in the book by Stewart Culin, Games of the North American Indians.