

Continuing Learning

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Grade: Kindergarten (Learning can extend K-7)

Category: Numeracy

Title of Lesson: Throw Sticks Game (Ways to Make 5)

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

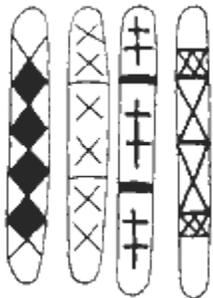
Indigenous Competency: Mental (skills, knowledge, thought)

Big Idea: Numbers represent quantities that can be decomposed into smaller parts

Content: Ways to make 5

Materials Needed:

- 40 small rocks
- Two different objects that can be used to mark your position around the rocks
- 5 sticks (i.e. popsicle sticks) with one side decorated and one side blank



Example of how you can design the sticks on one side.

Task Instructions: (Step by Step)

1 – Review all the ways to make 5. A review of this lesson is at the end of the instructions for the game in Extensions (Optional). You may choose to do this first or go right into playing the game.

2 – Play the Throw Sticks game following the instructions below.

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Throw Sticks

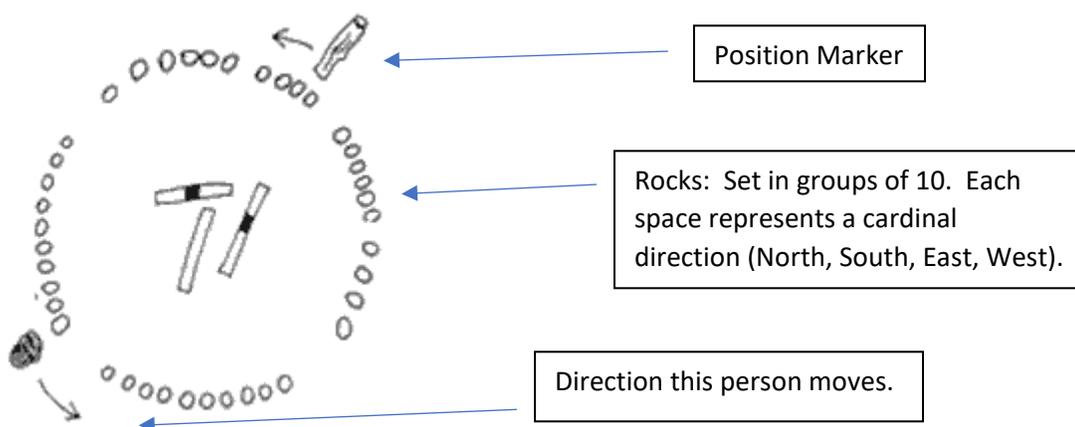
Throw Sticks or Stick Games have been played by many Indigenous peoples. The version used for the rules is from the Chiricahua Apache from Southwestern New Mexico and Mexico.

Stick games involve probability, patterns and relations, numbers operations (place value), and data management.

Variations in this game occur in how many sticks are used, scoring, how many players, and who plays. For the Chiricahua Nation, only women played this game. We will use a variation of ways to make 5.

The **winner** is the person whose position marker has gone all the way around the circle.

Game Board: Arrange the forty rocks in four groups of 10 in a circle.



Rules:

Place your marker at the beginning of one set of 10 rocks. Your opponent will place their marker at the opposite side of you.

Decide which direction you are going to move. One person will go clockwise and one person will go counter clockwise or both of you will go in the same direction.

Decide who will go first.

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Toss the five sticks. Using the ways to make 5 and the points(spaces) that they represent, move your object around the rocks. Each rock represents one point or one space.

Ways to Make 5

5 painted sides = 10 points = 10 rock spaces

4 painted sides and one blank side = 8 points = 8 rock spaces

3 painted sides and 2 blank sides = 6 points = 6 rock spaces

2 painted sides and 3 blank sides = 4 points = 4 rock spaces

1 painted side and 4 blank sides = 2 points = 2 rock spaces

Once you move it is your opponents turn. If you land on the same space your opponents marker is on they must go back to their starting position.

The winner is the player who makes it around the circle of rocks back to their starting position.

More Indigenous games can be found at:

<http://mathcentral.uregina.ca/RR/database/RR.09.00/treptau1/>

Extensions (Optional):

Review on Ways to Make 5

Materials Needed:

Blank paper

Two different colours of marker, crayon, or pencil crayon

Deck of cards

Task Instructions:

1 – Create a 5 frame on a piece of paper 5 times. The following is a 5 frame.

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2 – Take out one set of cards numbers 1 to 5.

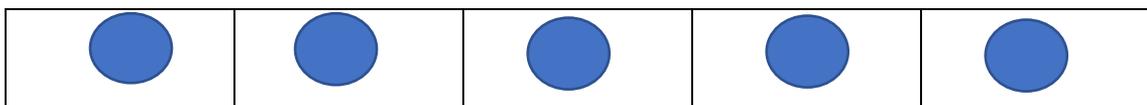
3 – Have your child pick one of the cards. Set it aside. They will colour in the appropriate number of frames. For instance, if they pick the number 2 card, they will colour in two of the frames.

4 – With the other colour they will colour in the rest of the frames. In our example, they would colour in the 3 spaces remaining.

5 – Have them write the expression underneath the frame they have coloured. In this example they would write, $2 + 3 = 5$.

6 – Continue until they have picked all of the cards and completed all of the 5 frames.

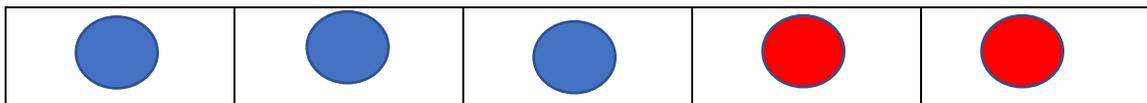
Once completed their paper will look like something like this:



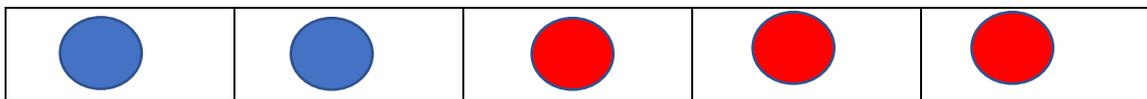
$$\underline{\quad\quad} 5 \underline{\quad\quad} + \underline{\quad\quad} 0 \underline{\quad\quad} = 5$$



$$\underline{\quad\quad} 4 \underline{\quad\quad} + \underline{\quad\quad} 1 \underline{\quad\quad} = 5$$



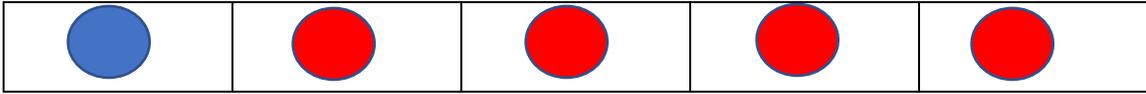
$$\underline{\quad\quad} 3 \underline{\quad\quad} + \underline{\quad\quad} 2 \underline{\quad\quad} = 5$$



$$\underline{\quad\quad} 2 \underline{\quad\quad} + \underline{\quad\quad} 3 \underline{\quad\quad} = 5$$

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$$\underline{\quad} 1 \underline{\quad} + \underline{\quad} 4 \underline{\quad} = 5$$