

E-D.1 Multiplication and First Nations Drumming

Grade 5

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Students have memorized multiplication facts. In this series of lessons, immersed in videos and first-hand experiences of First Nations drumming, students come to a deep understanding of what mathematical multiplication actually means, from which some students discover what division actually means.

Curricular Knowledge

- Outcome N5.2 Analyze models of, develop strategies for, and carry out multiplication of whole numbers.
- Indicator c. Recall multiplication facts to 81 including within problem solving and calculations of larger products.

Indigenous Knowledge

The students will learn about the importance of the hand drum including what the drums are made of, what they symbolize, when they are used, and why they are considered sacred.

Time 2-4 hours

Materials

- a. *The Song Within My Heart* by David Bouchard
- b. A guest performer/instructor (for the North East School Division, it was Brad Ironstar)
- c. Hand drums
- d. Video examples of First Nations Drumming:
9 Year Old Rocks Hand Drum
<https://www.youtube.com/watch?v=wqBzdNpnyYY>
Hay Creek Youth Hand Drum Champions
<https://www.youtube.com/watch?v=bfwllmEh9oo>
- e. North East School Division's drum bundle
- f. Appendix A: Teacher Background Information on First Nations perspectives
- g. Student Handout (pp. 5-6, below): First Nations Drumming and Multiplication

A. Teaching Indigenous Perspectives

1. Traditional teachings of the drum – share details about the importance and symbolism of the drum to First Nations cultures. Read the story *The Song Within My Heart* to the class. Discuss the construction of the drum and the symbolism in its construction (see the section Background Information below).

2. Indigenous math observed in Indigenous drumming: Listen to and identify different rhythm patterns used with the hand drum by a local First Nations drummer.
3. Arrange this guest performer/instructor visit with your school principal. An honorarium and a pouch of tobacco are usually required.

B. Teaching Curricular Component

4. Practice making multiplication equations from drumming – review the parts of a multiplication equation: factors and product.
View the video 9 Year Old Rocks Hand Drum. Listen a second time and count the beats and count the number of groups of beats. Can we find examples of multiplication equations by counting the beats and the groups of beats? Lead students to the understanding that one factor is the number of beats and another factor is the number of groups. Create two or three examples with the class.
View the video Hay Creek Youth Hand Drum Champions. Have the students create multiplication equations from the rhythms and the groups of beats used in the drumming.
Extension: Can we make different multiplication equations if we consider that there are four drummers in this video drumming at the same time?

C. Creating and Presenting a Drum Song

5. Creating: Students will plan their multiplication equation for drumming. They pick two factors and use one for the number of beats in their rhythm and one for the number of times they will repeat their rhythm. Students will practice their drumming.
6. Presenting: In small groups, students will present their drumming to the class. Students listening will write down one multiplication equation from each presentation.

D. Assessment

7. Students will hand in the assessment handout that includes their multiplication equation plus the ones presented by their classmates (attached).
8. Students will answer the questions about hand drums, how they are made when they are used, and their importance.

APPENDIX A

Background Information on First Nations Drumming and Drums

Some Facts

The first drum was given to a woman (White Buffalo Woman).

Traditional songs were always songs of thankfulness.

The drumming is the heartbeat of Mother Earth. It is the sound of the Universe.

The first drum beat we hear is our mother's heartbeat.

The drum calls to us.

It is used in traditional ceremony and in social gatherings.

The drum is considered female in order for the boys to learn to respect women.

There are different types of drums:

Pow wow drum: Large, bass type drum that a number of drummers and singers gather around.

Must have at least four drummers to represent the four quadrants of the medicine wheel.

Used for ceremonies and celebrations.

Before the big drum is played, it is offered tobacco and a smudge.

Hand drum: A small single-headed drum.

Used by one person.

Smudged to cleanse it before using.

Importance to First Nations People

Drum beats are the heartbeats of Mother Earth.

It is believed that "we are the drum." It unifies and reflects First Nations people.

It draws people and communities together.

It is used in different circumstances: weddings, feasts, and funerals.

Drums are round to reflect the circle of life and the inclusiveness of all that exists on Mother Earth.

The drum teaches many lessons.

The drum reaches to us mentally, physically, emotionally, and spiritually.

Respect

Drums are treated with respect.

One never 'beats' or 'pounds' on a drum. One makes the drum speak or sing.

Almost everything one does can be related back to the drum.

To have a First Nations drum is a huge honour. It must be treated with respect.

The drum symbolizes what we are and what we can become.

Spirituality

A First Nations drum can connect people to their spiritual world.

Drumming is a spiritual experience.

Drumming can heal:

Medicine people drum near a person's body to help healing.

Drumming helps heal a person physically or emotionally in pain.

The drum beat mimics the beat of a human heart, so it can slow the heart rhythm or speed up the heart rhythm.

The spiritual role of the drum is very powerful.

Drum Making

Different Indigenous groups have different methods/styles of making drums.

One cannot sell or trade the first drum one makes. One may give it away.

One cannot work on a drum when angry.

One should put only good and positive thoughts in when making a drum. Create a drum with honour, integrity, and peace in one's heart.

When the drum speaks, it brings out all of these values.

Some Indigenous communities have ceremonies that accompany drum making.

A drum is made from our plant and animal relatives. They provide us with life.

The drum's frame comes from Grandfather Tree, and the hide cover comes from the Animal World. This teaches us to remember that plants and animals were here before humans arrived.

The hand drum is held together with sinew.

No metal is used to make a hand drum.

The back of a traditional hand drum represents the medicine wheel.

Singing and Dancing

When the drum speaks, everyone should honour it, often by standing.

One must have permission to use someone else's drum.

In many First Nations cultures, performing songs and dances is one of the highest levels of respect that can be shown to another person.

Our energy goes into the drum, so we must be healthy when drumming. Drummers must be clean from drugs or alcohol for at least four days before performing songs and dances.

The drum sings with emotions:

It sings nicely when it's dry.

It sounds empty when it's wet or humid.

It won't sing when it's cold.

Girls can touch the hand drum but not the Pow wow drum.

The drum gets ready before a ceremony. It is smudged to cleanse it and sometimes an offering of tobacco will be given.

Symbolism in the Drum

Circle – Mother Earth

Frame – Grandfather Tree

Cover – Animal World

Student Handout

Name: _____

Date: _____

Math 5 First Nations Drumming and Multiplication

Outcome N5.2 Analyze models of, develop strategies for, and carry out multiplication of whole numbers.

Student	Number of Beats	How Many Groups of Beats?	Multiplication Equation

See next page.

1. What are hand drums made of?
2. What does the drum represent?
3. The back of the hand drum is divided into four sections. What do the four sections represent?
4. When are hand drums used?
5. What are some of the different rhythms {Mr. Ironstar} used in his drumming?
6. The drum is sacred to {Mr. Ironstar} and to other Indigenous people. How is it sacred for them?