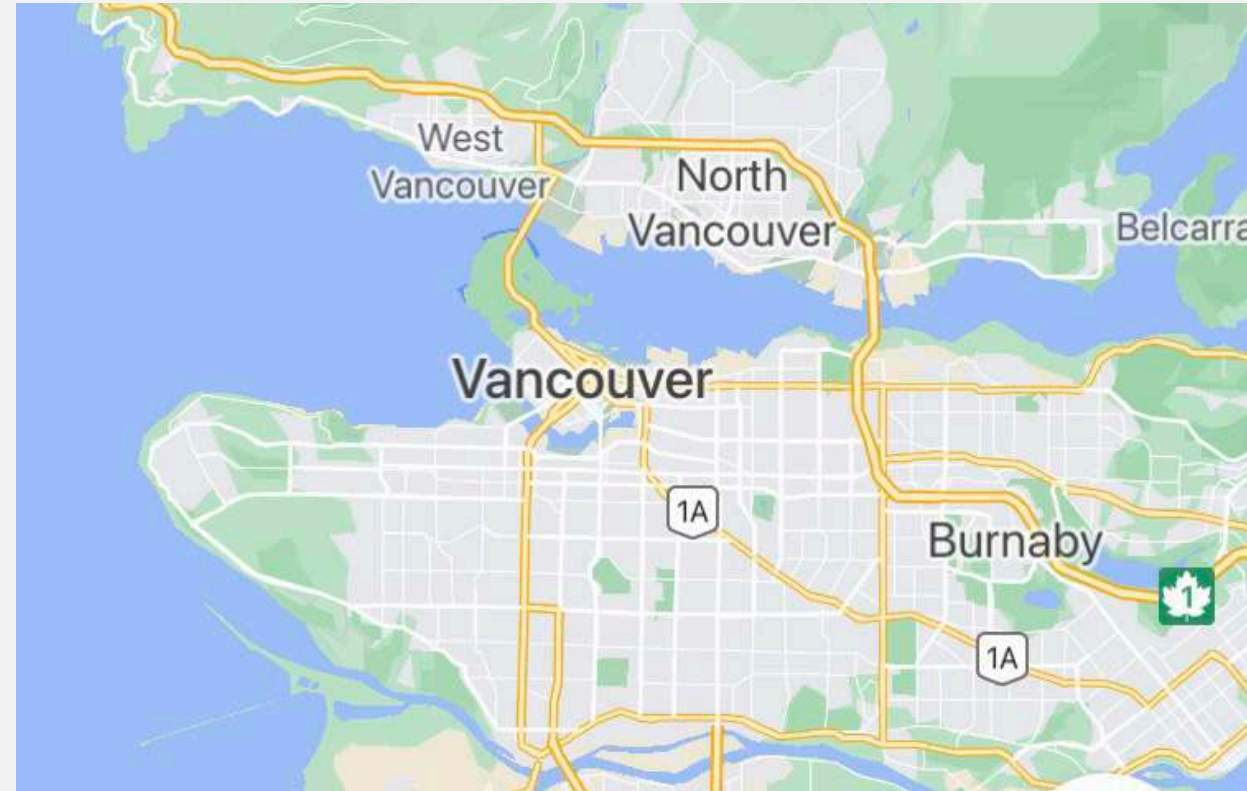


# LAND ACKNOWLEDGMENT

I acknowledge that I live, work, and play on the unceded and traditional territories of the x<sup>w</sup>məθk<sup>w</sup>əy̓əm (Musqueam), sk̓wx̓wú7mesh (Squamish), and seíłwítulh (Tsleil-Waututh) Coast Salish Peoples.



# THE PAPER DRUM PROJECT

By Megan Hanna



WHAT/WHO  
INSPIRED YOU –  
HOW DID YOU  
GET STARTED?

WHERE IS THE MATH?



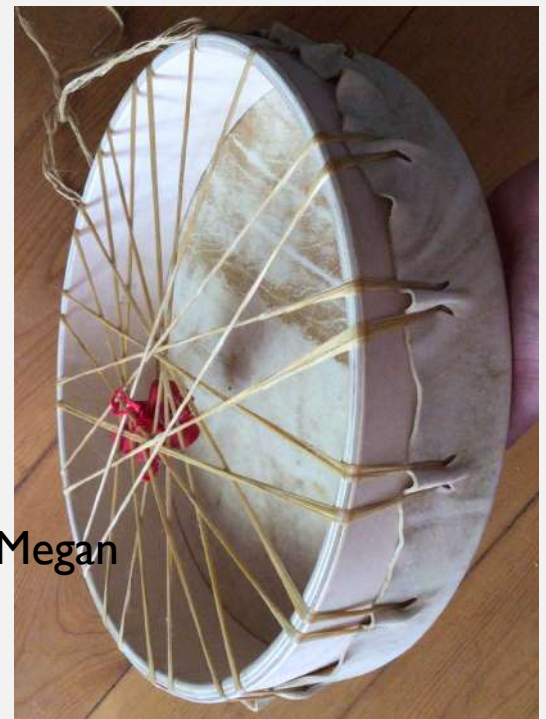
Photo by Megan  
Hanna



# HOW MUCH SINEW DO I NEED TO STRING MY DRUM?

- Diameter: 12”
- Some extra on the sides
- 32 holes
- First and last holes only have one sinew strung through it
- One continuous piece of sinew
- When you tighten the drum, the sinew becomes longer

Photos by Megan  
Hanna



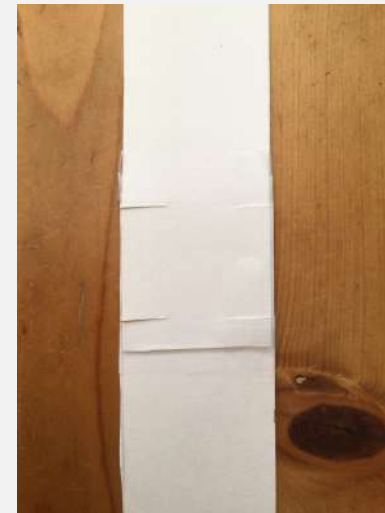
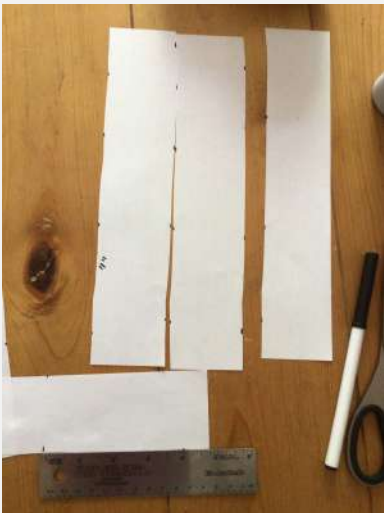
## 2. WHAT ARE YOU TRYING TO DO?

- Things you will need:



- **If we want to make a drum that is 12" (2 1/4" deep)...**
- 1. How long and wide does the drum ring need to be?
- 2. How large do we need to cut the hide?
- 3. How far apart do we need to punch the holes?
- 4. How much sinew do we need to string the drum?
- 5. How much paint do you need to paint your drum?

Photos by Megan Hanna



### 3. WHAT ARE YOU LEARNING?

#### Grade 6

- small to large numbers (thousandths to billions)
- multiplication and division facts to 100 (developing computational fluency)
- **improper fractions and mixed numbers**
- **introduction to ratios**
- whole-number percents and percentage discounts
- **multiplication and division of decimals**
- one-step equations with whole-number coefficients and solutions
- **perimeter of complex shapes**
- area of triangles, parallelograms, and trapezoids
- **angle measurement and classification**
- **volume and capacity**
- triangles
- line graphs
- financial literacy — simple budgeting and consumer math

#### Grade 8

- perfect squares, square and cube roots
- percents less than 1 and greater than 100 (decimal and fractional percents)
- numerical proportional reasoning (rates, ratio, proportions, and percent)
- **operations with fractions (addition, subtraction, multiplication, division, and order of operations)**
- discrete linear relations (extended to larger numbers, limited to integers)
- expressions- writing and evaluating using substitution
- two-step equations with integer coefficients, constants, and solutions
- **surface area and volume of regular solids, including triangular and other right prisms and cylinders**
- Pythagorean theorem
- **construction, views, and nets of 3D objects**
- **central tendency**
- financial literacy — best buys





Photo by Megan Hanna



Photo by Megan Hanna



Photo by Megan Hanna

## 4. WHAT'S NEXT?