



Connecting Math to Our Lives and Communities

The Fisherman Game

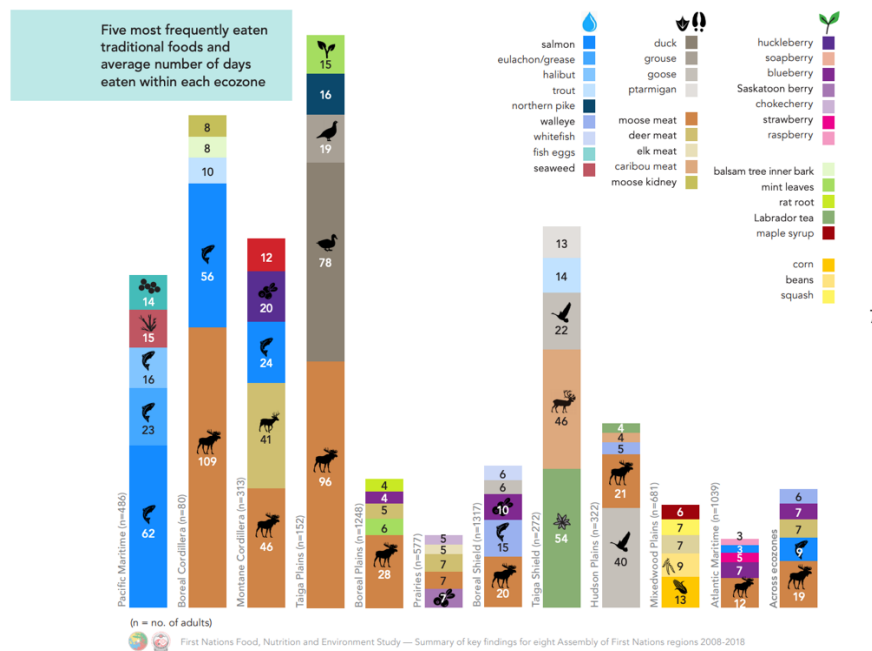
Introduction

Go to the CMTOLC website under the Food Security section and find the link to a Desmos activity. This activity will show us the importance of Indigenous communities having adequate access to traditional food in helping to decrease food insecurity.

A large part of this access includes native fish populations, especially for those communities with access to costal waters. Across Canada, fish is the second most traditional food eaten in Indigenous households after moose. Fish is a primary source of protein and essential nutrients to many Nova Scotians and over 24 000 people are employed by the fishing industry, this is higher than any other province!

However, the growing demand for fish (Nme’juey) leads to over harvesting and this puts strain on our beloved natural fish populations. In our local communities Mi’kmaq fishing operations have been subject to harassment, catch seizures, and prosecution for trying to practice their right to harvest their traditional food.

It is important that we protect the declining fish populations so that our Mi’kmaq communities can continue to have adequate access to their traditional foods. This is where sustainable fishing practices come in! Sustainable fishing is the practice of leaving enough fish in the ocean so that populations can continue to grow and reproduce, respecting habitats, and ensuring that the people who depend on fishing can maintain their livelihoods. In this activity you will play a game that explores what sustainable fishing really means!



Math Connections

- Calculations
- Graphing
- Tables

Activity

We will play a game that explores what happens to fish populations when there are no limits on the number of fish that can be caught in a season.

1. We will place you into breakout rooms with 4-5 other participants, each breakout room will play the game on an assigned jamboard which is found at the following link: (<https://jamboard.google.com/d/1Bp5IAgf6J6aoe3-bHCqWq6ldQwa1-84DjiQ0EBpiWjg/edit?usp=sharing>).
2. Each breakout group will represent a community of individual fishers who are trying to make a living.
3. Groups of 4 will have a jamboard that has a pond with 15 fish, and groups of 5 will have a jamboard that has a pond with 20 fish. Once we begin playing do not talk to the other fishers in your group!
4. In each round, every player will take a turn to fish. On your turn you can choose to take at least 1 fish but can take up to 3 fish.
5. After each round record in Table 1 how many fish that you took and calculate the amount of money they made (each fish is worth \$5.00). In Table 2 enter how many fish that the whole team took after each round!
6. Now take the number of fish caught during the first round out of the jamboard pond.
7. After you complete the round, the remaining fish population can be replenished. This means that the number of fish left in your jamboard pond will double. (After round 1 if you have 5 fish left in the pond, round 2 your pond would have 10.)
8. Continue playing the game for 5 rounds, or until there are no fish left!
9. Once you have finished your rounds, graph the results that you recorded from your community tracking sheet on the blank graph below! You will have 3 lines plotted on one graph, in order to keep this information straight choose a symbol to represent which information you are plotting on the legend included!

Table 1

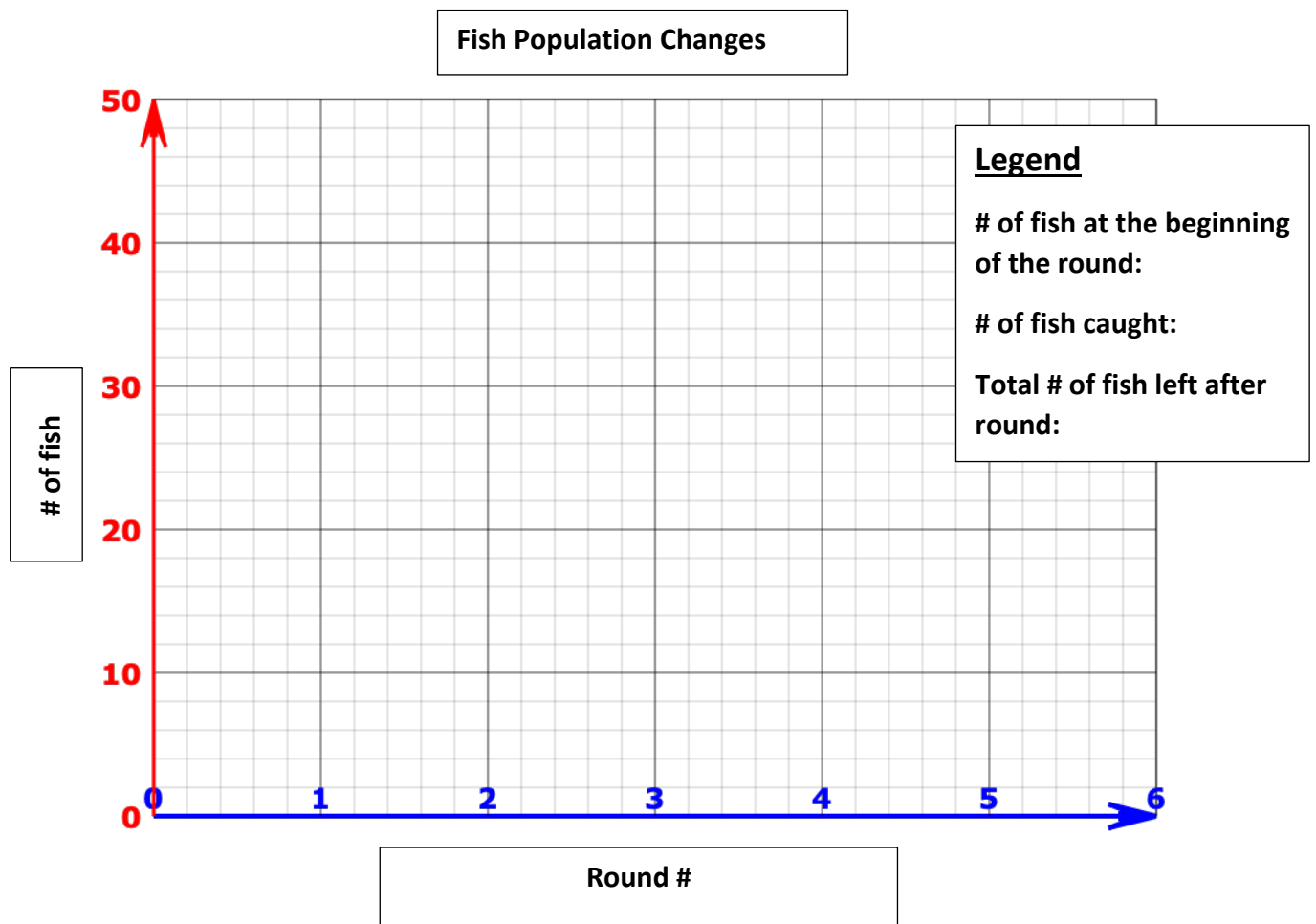
Individual Tracking Sheet

	Fish Caught	Money Earned (# of fish x \$5.00)
Round 1		
Round 2		
Round 3		
Round 4		
Round 5		

Table 2

Community Tracking Sheet

x- axis	Total # of fish at the beginning of the round (y-axis)	Total # of fish caught (y-axis)	Total # of fish left (y-axis)
Round 1			
Round 2			
Round 3			
Round 4			
Round 5			



Send us a photo of your graph at **Connecting Math to Our Lives and Communities** email (cmtolcstfx@gmail.com)! ☺