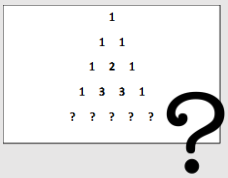
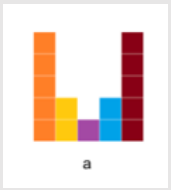
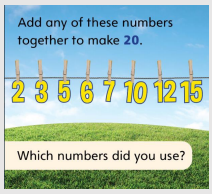
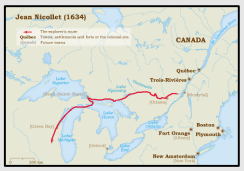
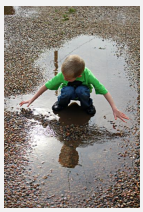
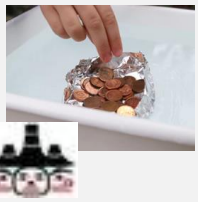
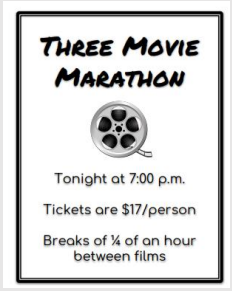
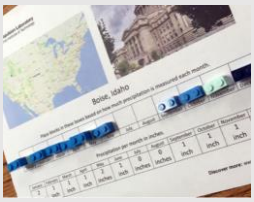
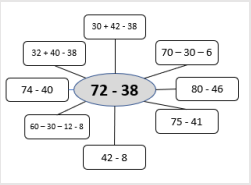
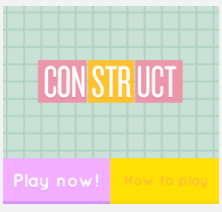
Math 1 - 3 Activities Menu M

Instructions: Each day, choose from the options below.
Enjoy as many or as few as you have time for.

Curriculum Connections

Creating Futures, Leading and Learning for All

	A	B	C	D	E
Great Lakes Estimation	Lake Ontario 	Lake Erie 	Lake Huron 	Lake Michigan 	Lake Superior 
Talking About Math	What Comes Next? 	Which Chart? 	Make 20 	A Belt for a Tree 	Explorer of New France 
Activities / Games	Sudo-Clue 	Toss & Compare 	Science of Puddles 	Tinfoil Boat Challenge 	Celebrate! Baking Bannock 
Problems	Midnight Movie Madness 	What Shapes? 	NIBI Song Listen to audio here. 	Be a Hydrologist 	Mental Math: How do you see it? 
Technology					

Please click on this icon, wherever you see it, to access Indigenous content.

Choice Board Background Information:

- ✓ Choice boards were created to provide flexibility in learning at home;
- ✓ Boards were planned for divisions: K-3, 4-6, 7-8 for open, individualized learning;
- ✓ Planned with recognition that parents may currently hold various roles at home;
- ✓ Designed to enhance the materials provided by the Ministry;
- ✓ Experiential learning focus with accessible materials at home;
- ✓ Low/No tech options;
- ✓ Accessible on mobile devices.

Choice Boards - Parents Can:

- ✓ Choose as many or as few learning opportunities as desired;
- ✓ Follow the days of the week or be flexible in using the choice boards;
- ✓ Be confident that the learning is based in curriculum;
- ✓ Engage other children in the home in common experiential learning (i.e., baking, reading, playing math games, being active together);
- ✓ Click on the links provided for further learning and sample questions to ask;
- ✓ Have fun!

UPPER CANADA District School Board

Explanatory Notes:

LEARN AT HOME CHOICE BOARDS FOR PARENTS AND EDUCATORS

Creating Futures, Leading and Learning for All

Choice Board Activities Provide:

- ✓ Clear connections to curriculum expectations and process skills;
- ✓ Open activities with options to individualize learning;
- ✓ Accessibility (many require little to no technology);
- ✓ Math – focus on numeracy skills;
- ✓ Literacy – focus on reading, writing, oral language and media literacy;
- ✓ French learning opportunities;
- ✓ Health and Physical Well-Being;
- ✓ Opportunities to foster connections within the household;
- ✓ Focus on conversation and thinking.

Choice Boards - Teachers Can:

- ✓ Create classroom-based choice boards for students while they are learning at home;
- ✓ Incorporate ideas from the choice boards into teaching practices, daily and weekly planning;
- ✓ Explore and incorporate new resources into classroom learning;
- ✓ Engage students and families in virtually sharing learning with one another;
- ✓ Expand on activities in order to provide individualized learning opportunities;
- ✓ Incorporate other UCDSB resources (i.e., Math Tool, VLC, links) to extend student learning.

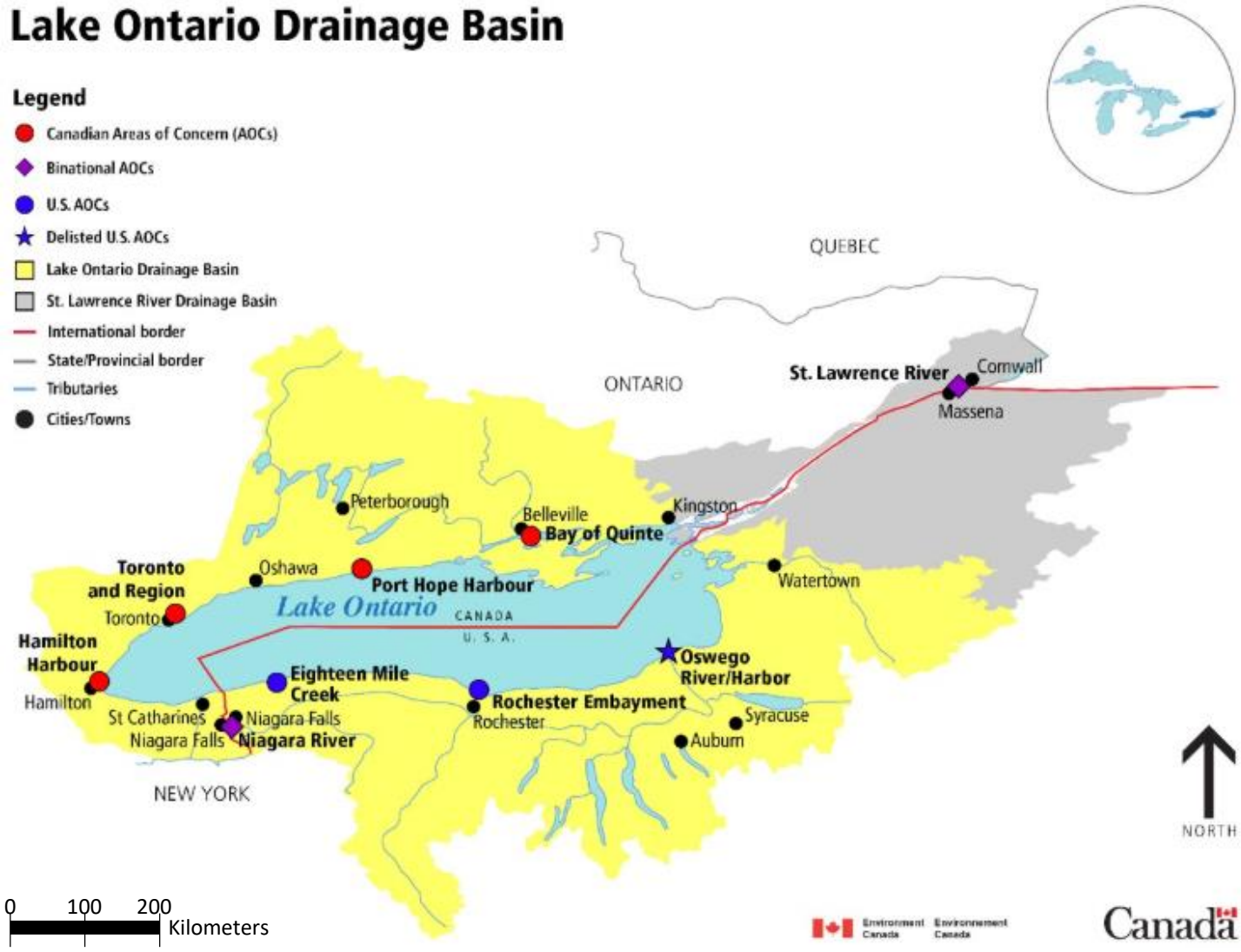
Great Lakes Estimation: **Lake Ontario**

See the next page for a map to help you with your estimates.			
	Too low?	Too high?	Just right?
About how long is Lake Ontario?			
About how far is it around Lake Ontario?			
What do you think the approximate area of Lake Ontario would be?			
About how many Lake Ontarios could fit into Lake Superior? How do you know?			
If you paddle at 5 km/hour (canoe), about how long would it take to paddle the length of Lake Ontario?			

Check your estimates at Environment Canada.

Great Lakes Estimation: Lake Ontario Map

Taken from: https://www.canada.ca/en/environment-climate-change/services/great-lakes-protection/maps/lake-ontario-drainage-basin.html



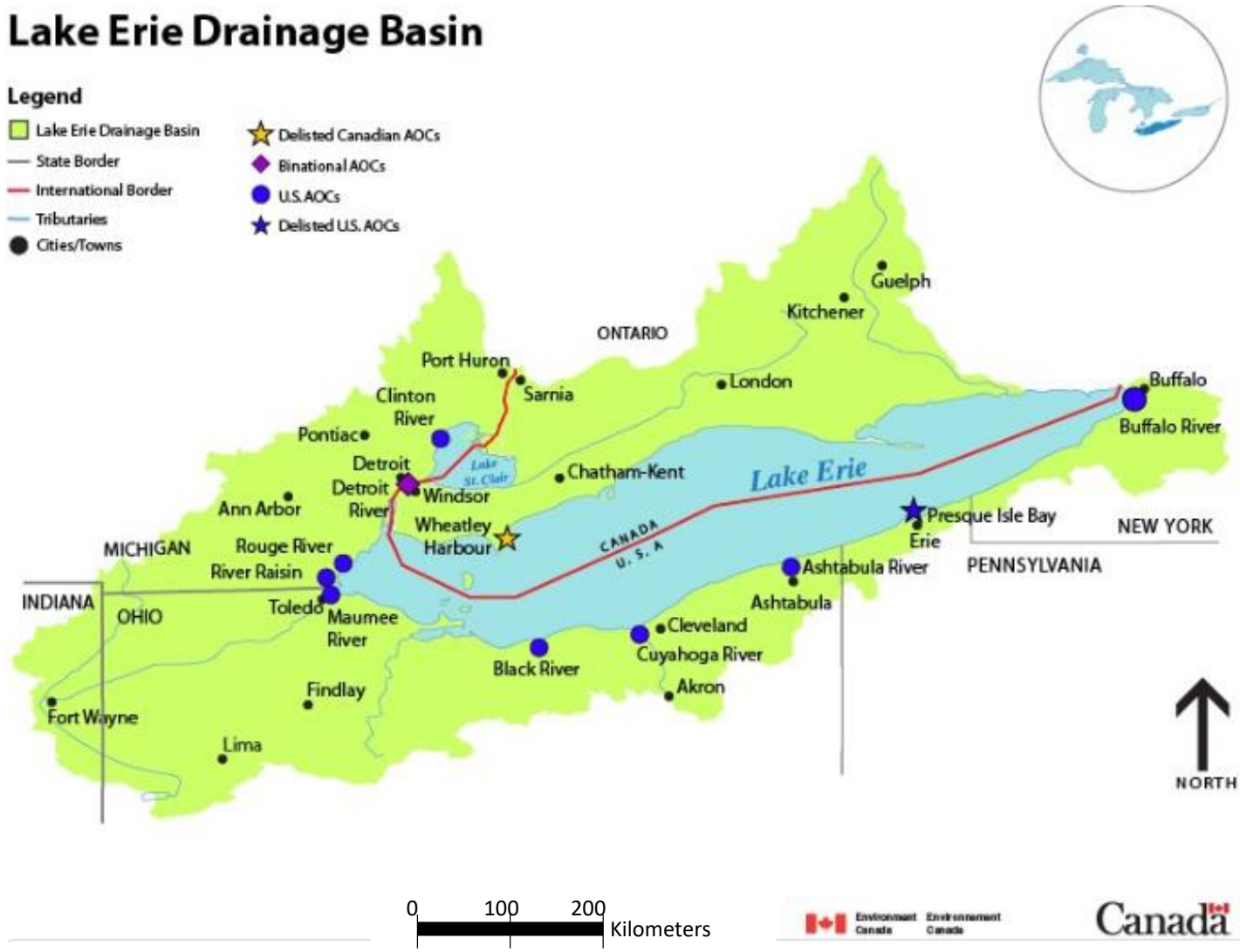
Great Lakes Estimation: Lake Erie

See the next page for a map to help you with your estimates.			
	Too low?	Too high?	Just right?
About how long is Lake Erie?			
About how far is it around Lake Erie?			
What do you think is the approximate area of Lake Erie?			
About how many Lake Eries could fit into Lake Superior? How do you know?			
If you paddle at 5 km/hour (canoe), about how long would it take to paddle the length of Lake Erie?			

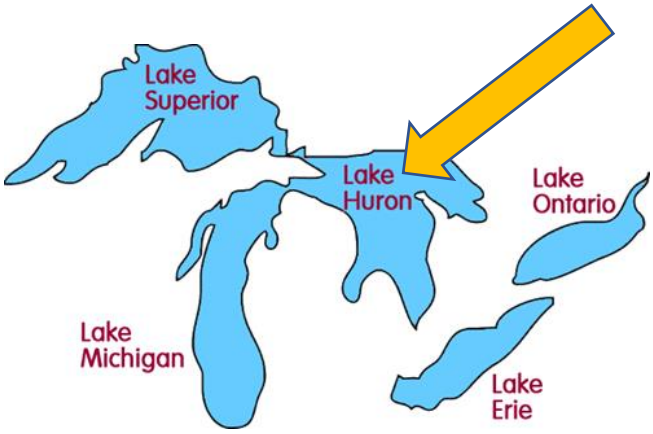
Check your estimates at Environment Canada.

Great Lakes Estimation: Lake Erie Map

Taken from: https://www.canada.ca/en/environment-climate-change/services/great-lakes-protection/maps/lake-erie-drainage-basin.html



Great Lakes Estimation: Lake Huron



See the next page for a map to help you with your estimates.			
	Too low?	Too high?	Just right?
About how long is Lake Huron?			
About how far is it around Lake Huron?			
What do you think is the approximate area of Lake Huron?			
About how many Lake Hurons could fit into Lake Superior? How do you know?			
If you paddle at 5 km/hour (canoe), about how long would it take to paddle the length of Lake Huron?			

Check your estimates at Environment Canada.

Great Lakes Estimation: Lake Huron Map

Taken from: https://www.canada.ca/en/environment-climate-change/services/great-lakes-protection/maps/lake-huron-drainage-basin.html

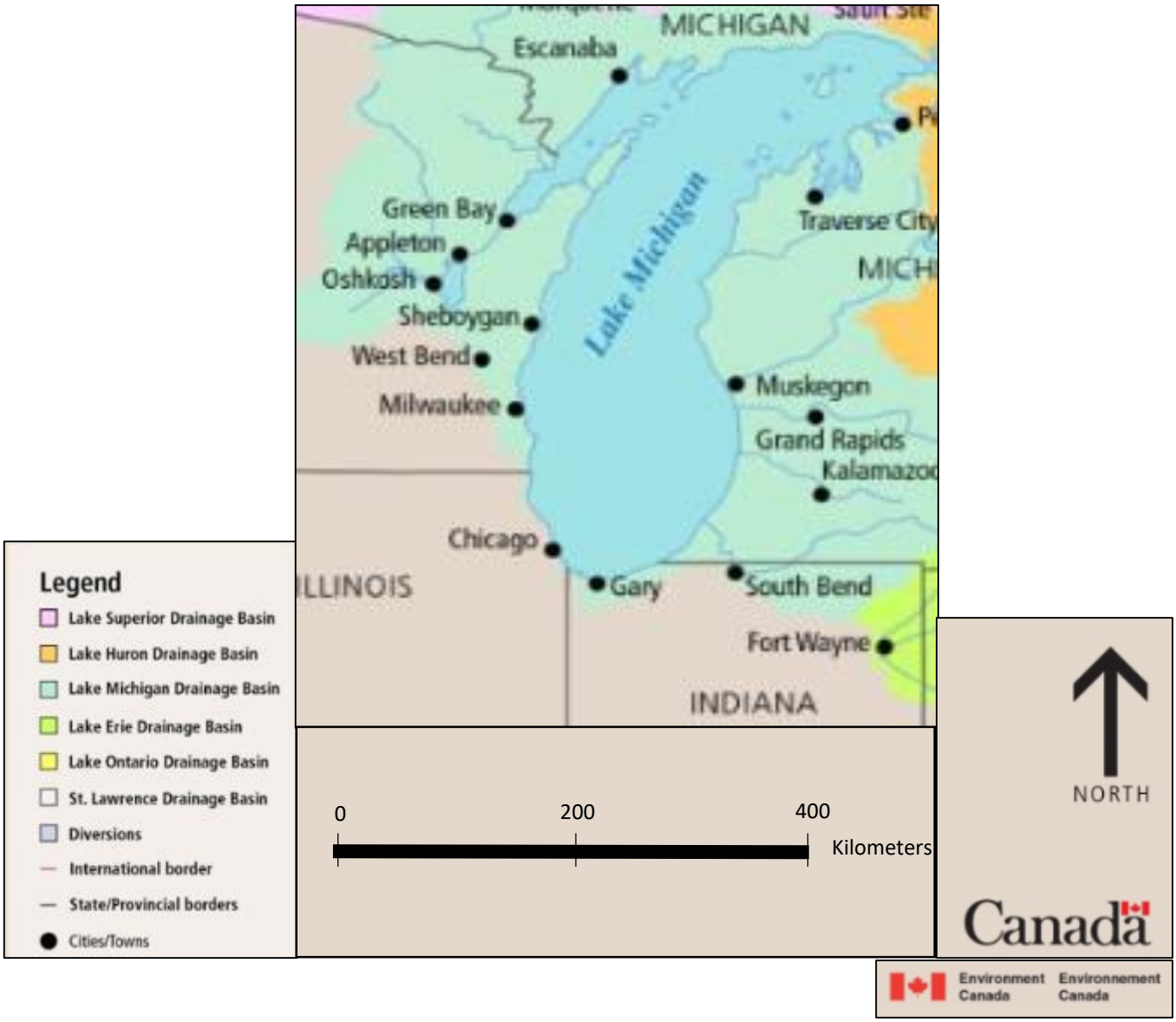
Great Lakes Estimation: Lake Michigan

See the next page for a map to help you with your estimates.			
	Too low?	Too high?	Just right?
About how long is Lake Michigan?			
About how far is it around Lake Michigan?			
What do you think is the approximate area of Lake Michigan?			
About how many Lake Michigans could fit into Lake Superior? How do you know?			
If you paddle at 5 km/hour (canoe), about how long would it take to paddle the length of Lake Michigan?			

Check your estimates at Environment Canada.

Great Lakes Estimation: Lake Michigan Map

Taken from: https://www.canada.ca/en/environment-climate-change/services/great-lakes-protection/maps/drainage-basin.html



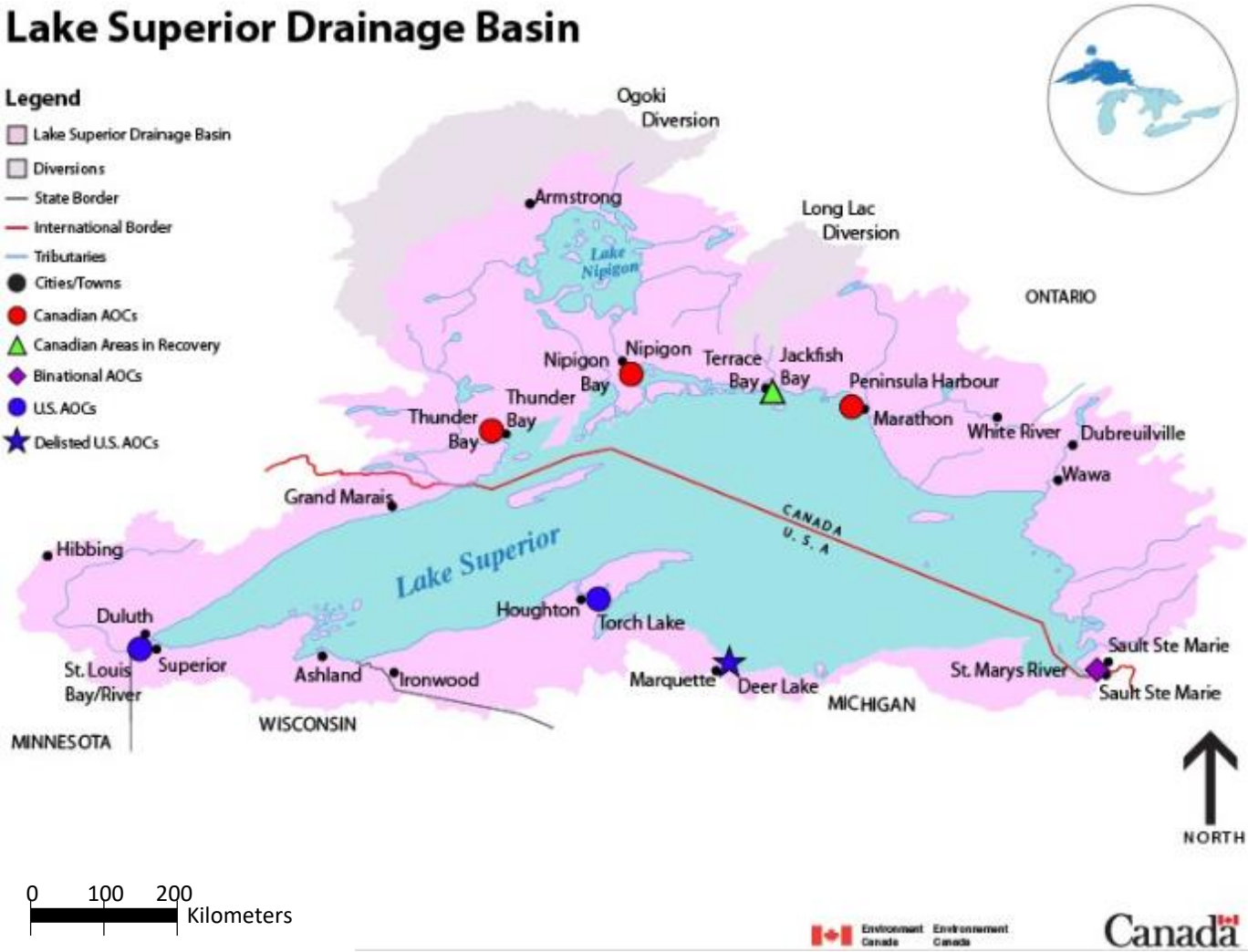
Great Lakes Estimation: Lake Superior

See the next page for a map to help you with your estimates.			
	Too low?	Too high?	Just right?
About how long is Lake Superior?			
About how far is it around Lake Superior?			
What do you think is the approximate area of Lake Superior?			
About how many Lake Superiors could fit into the other 4 Great Lakes combined? How do you know?			
If you paddle at 5 km/hour (canoe), about how long would it take to paddle the length of Lake Superior?			

Check your estimates at Environment Canada.

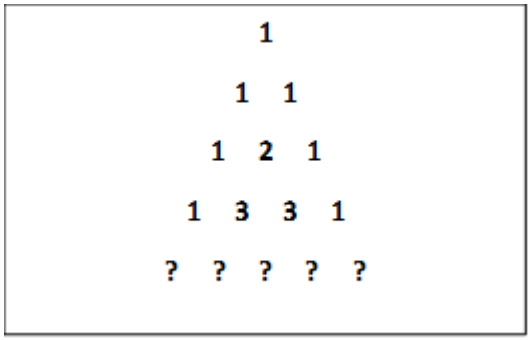
Great Lakes Estimation: Lake Superior Map

Taken from: https://www.canada.ca/en/environment-climate-change/services/great-lakes-protection/maps/lake-superior-drainage-basin.html

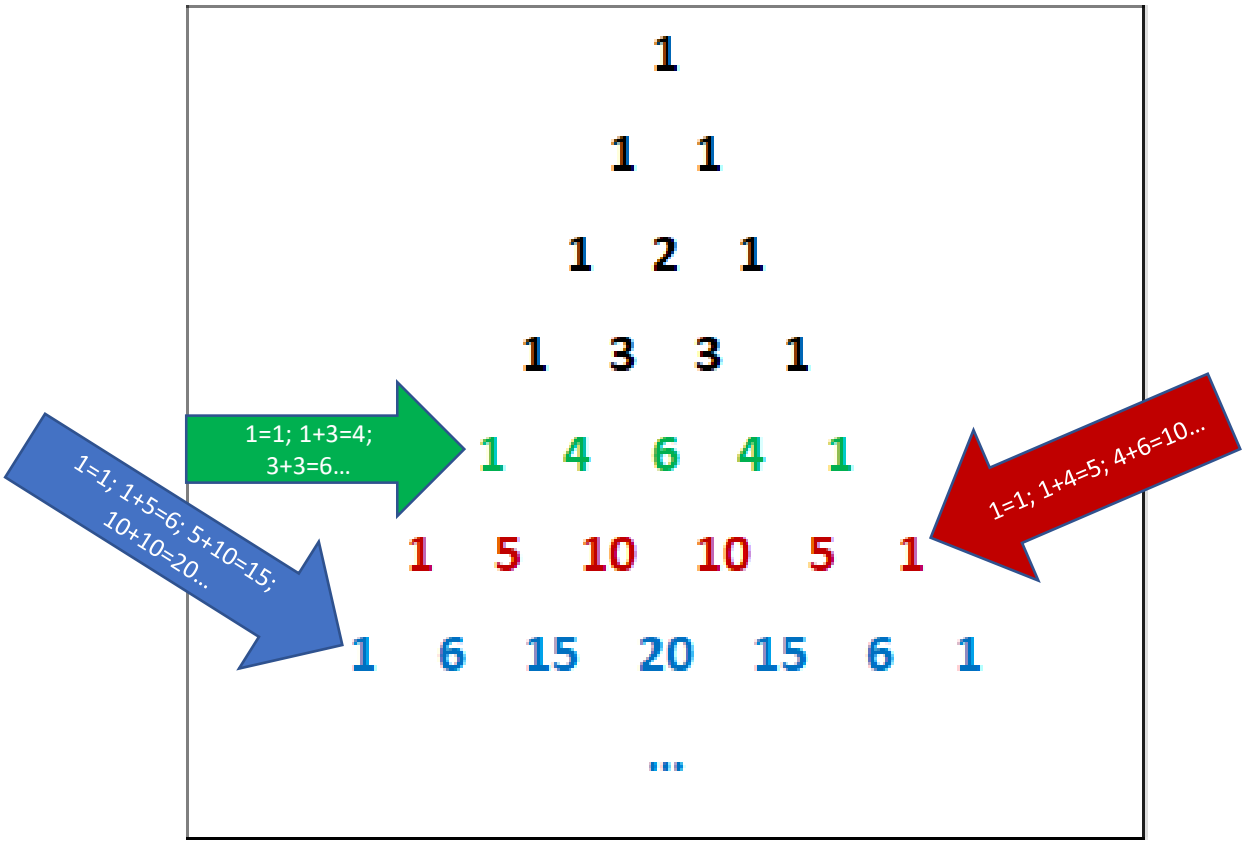


What Comes Next?

Solve the next two rows (and beyond!).



[Click here for more information about Pascal's Triangle.]



Hint: Each row is a result of the row above!
Can you find more number patterns here?

Which Chart? Which Graph?

https://donsteward.blogspot.com/search/label/bar%20charts

1

kids	freq
0	1
1	3
2	7
3	3
4	1

2

kids	freq
0	3
1	3
2	3
3	3
4	3

3

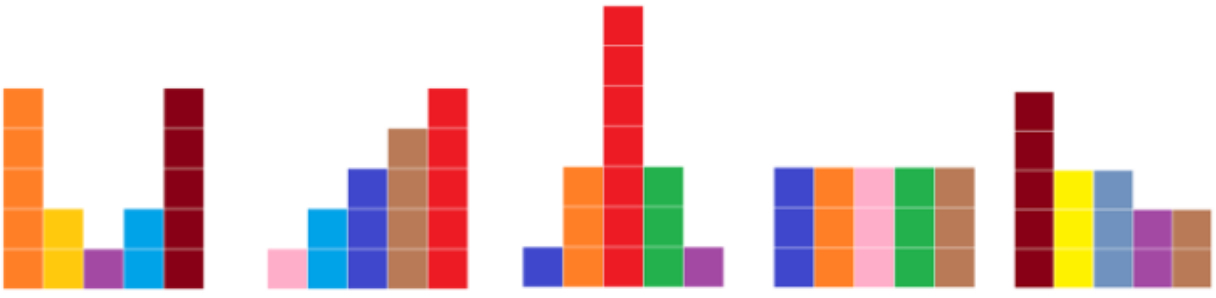
kids	freq
0	5
1	3
2	3
3	2
4	2

4

kids	freq
0	1
1	2
2	3
3	4
4	5

5

kids	freq
0	5
1	2
2	1
3	2
4	5

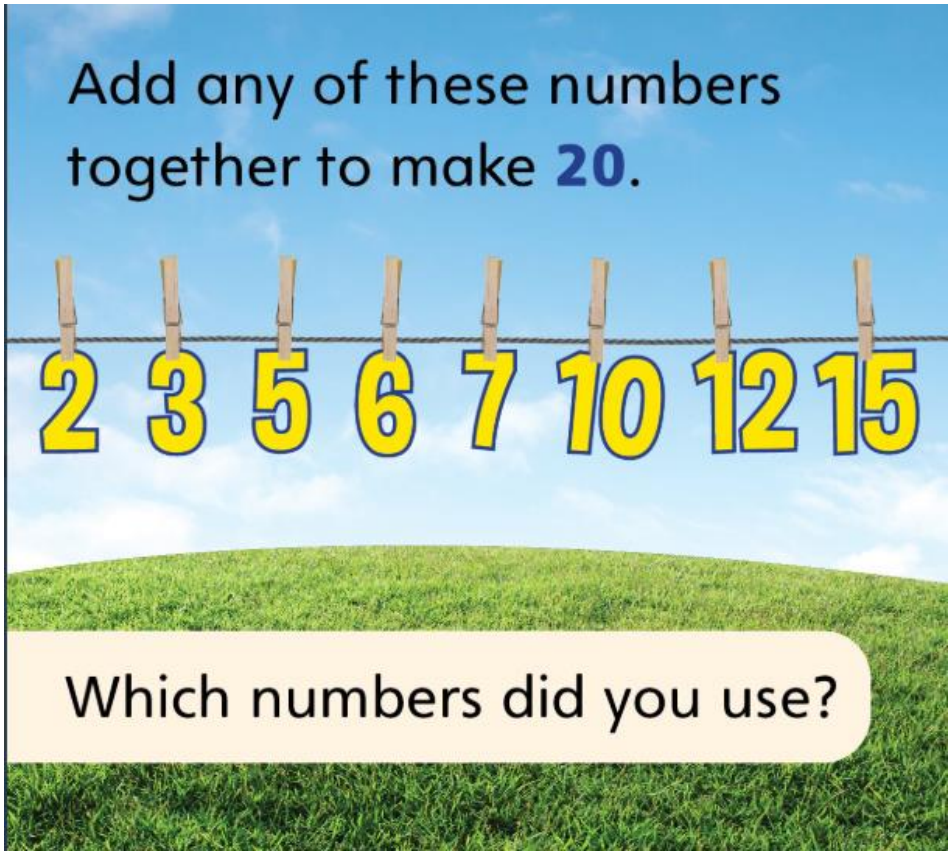


a b c d e

Which chart goes with which data set? How do you know?

Make 20

https://twitter.com/rubiconpubs/status/1268209998036942850?s=20



ADDITIONAL SUPPORT

And the Point Is ...

The purpose of this Number Talk is for students to determine possible combinations of addends that make a sum of 20.

As students volunteer their strategies, represent their thinking visually and symbolically. For example, you might use a number path, 10-frames, or linking cubes.

To consolidate the learning, you might ask the following question:

- Are there numbers not on the list that you would have used if you could?
  E.g., Yes, I saw 2 on the list. I know that 20 is 2 more than 18, so 18 would be a good number for the list.
  OR
  19 and 1 would be good numbers for the list because then you could just add 19 + 1.

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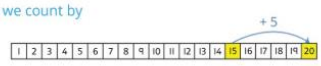
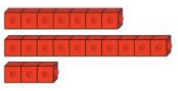
SAMPLE RESPONSE

Sample Response 1
I chose 15 and 5. I know that when we count by 5s, the number after 15 is 20.
15 + 5 is 20.



Sample Response 2
I used 10-frames. I knew I would need to fill up two 10-frames because that equals 20. I started by making 12 on two 10-frames. Then I added 7, but I saw that I still needed 1 more, and there is no 1 listed. So, I tried adding 6 instead of 7. That made 18. I added 2 more, and that made 20 exactly. I used 12, 6, and 2. 12 + 6 + 2 is 20.

Sample Response 3
I made a linking-cube train of 20 cubes. I looked at the numbers in the list and broke off 7. That left me with 13 cubes. 13 is not a number on the list, but I know 10 + 3 is 13, and 10 and 3 were both on the list. So, I broke off another 10 cubes and had 3 left. I used 7, 10, and 3. 7 + 10 + 3 is 20.



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A Belt for a Tree

When you measure the **distance around** a circle (or round object) you are finding its **circumference**. In the story Planting Seeds, the circumference of pumpkins is measured.

Your **challenge** is to find
and measure the *circumference*
of a **tree trunk** that is:

a) about 1 metre
b) about your height
c) greater than 200 cm
d) half your height

Enjoy the outdoors! Have a family member complete the challenge too. ☺

Explorer of New France: Jean Nicollet

Jean Nicollet is described as, “one of the most prestigious figures in the history of North American [colonial] exploration.” He is credited with being the first *European* to enter Lake Michigan and discover Lake Superior.*

Look at the map and travel route of Jean Nicollet.

- About how far do you think Nicollet travelled?
- How might you determine his distance travelled, from the route shown on this map?
- Plan a route as long as Nicollet’s, starting and ending from different places on the map. Might you be able to visit all the Great Lakes?

*Images and information taken from:
https://www.historymuseum.ca/virtual-museum-of-new-france/the-explorers/jean-nicollet-1634/

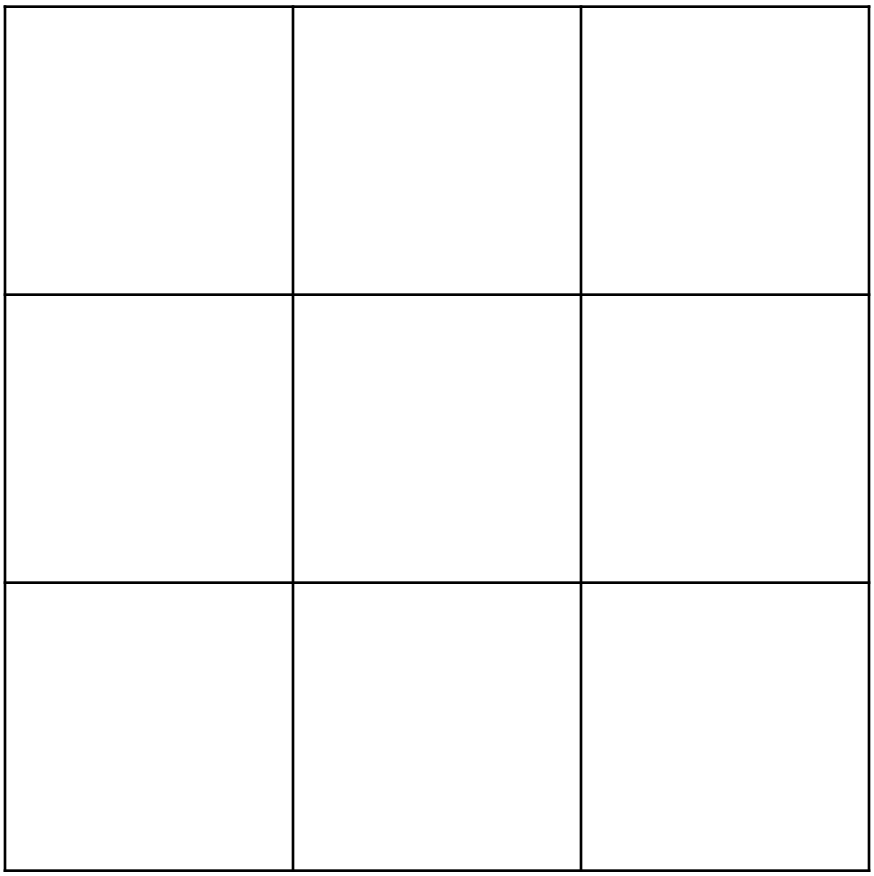
Sudo-Clue by ThinkSquare

https://sudoclue.thinksquare.com.au/

Instructions:
Use the clues to enter numbers in their correct location on the grid.

Clues:

1. The biggest number is in the middle square.
2. The smallest number is in the bottom, right corner.
3. The number to the left of the *1* is 5 more than itself.
4. The top, right square is equal to the number of toes on one foot.
5. The number *2* has a 7 above itself and an 8 below itself.
6. The top row has all odd numbers.
7. How do you know where to put the last number?



Toss & Compare

Toss & Compare

Round	Player A:	Player B:	Player C:	Player D:
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Click image for a recording sheet.

Materials:

- ❑ Recording sheet - *Toss & Compare*
- ❑ Pencil
- ❑ 2 dice

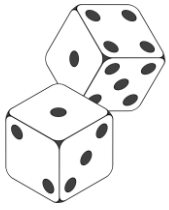
Instructions:

- ❑ Take turns rolling the dice.
- ❑ Form a 2-digit number based on the digits rolled.
- ❑ Record this number on the recording sheet.
- ❑ Once everyone has rolled, compare numbers to determine any of the following:
  - Which number is the lowest
  - Which number is the highest
  - Which number is even
  - Which number is odd
  - Which number is a multiple of 3? of 4? of 5?

  Tip - decide on this comparison before the game begins
- ❑ Circle that number. (In the case of a tie, each tied number is circled.)
- ❑ The winner is the first player to have five numbers circled.

Change it up:

- ❑ Assign a score of 10 to each circled number. What is each player's total score?
- ❑ Assign a score of 2? A score of 5? Now what is each player's total score?



Toss & Compare

Round	Player A:	Player B:	Player C:	Player D:
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Science of Puddles

Materials:

- ❑ Yarn, string, or chalk
- ❑ Scissors
- ❑ Measuring tape
- ❑ Observation sheet (sample at the bottom of this page)

Instructions:

1. After it rains, head outside and choose a puddle to re-visit throughout the day.
2. Use the yarn (string or chalk) to outline your puddle.
3. Consider the puddle: What is its size? What is its shape? What could you use to measure the puddle if you don't have measuring tape? Record this on your observation sheet.
4. Why do you think the puddle formed in this spot?
5. Predict: How might the puddle change in 30 minutes? in 1 hour? in 2 hours?
6. Based on your prediction, place an object (stick; toy) at the spot where you think the puddle's edge will be next.
7. Return at the designated time.
8. Repeat the observation, measurement, and prediction process.

Discuss factors that would influence the evaporation of your puddle:

- Is it a hot day?
- Is the sun out?
- Is it windy?
- Is it humid?
- Has it rained between checks?

Higher temperatures and wind increase the rate of evaporation; while humidity decreases it. As the water (liquid) gets warmer, it transforms into a vapour (gas). *The puddle is getting smaller because the water is changing its physical state from liquid to gas*. Evaporation is a fundamental part of the water cycle.

Time	Diagram of Puddle	Measurements	Observations

Tinfoil Boat Challenge

adapted from https://www.cbc.ca/parents/play/view/tin-foil-boat-float

Some engineers design boats made from steel and other dense, heavy materials that float. They solve problems, such as how to keep dense and heavy objects afloat. There are two forces at work for getting an object to float: gravity and buoyancy. *Gravity* is the force pushing down on the object (the boat) and *buoyancy* is the force of water pushing up on the object. Think about it: if you put a bowl in a sink full of water, does it float or sink? If you push down on the bowl, this creates extra force that helps *gravity* pull it down. The bowl doesn't go easily under water; we can feel the water pushing against the bowl - this is *buoyancy*.

Your challenge: Design then build a boat out of tinfoil. Your boat should carry weight without sinking.

Materials:

- ❑ Paper for designing
- ❑ Tinfoil (you may want to pre-cut squares - about 6 inches by 6 inches)
- ❑ Sink half-full of water
- ❑ Weights for testing (i.e., coins, Lego, pebbles)

Instructions:

1. Sketch a design of your boat - *considerations: how long is it? how deep is it?*
2. Construct your boat using a piece of tinfoil; test your boat in the sink (ensure it floats).
3. Add weights to your boat; record your observations – *see table provided on next page*.
4. Construct an alternate boat, based on modifications of Boat 1.
5. Repeat the floating, weighing, and redesign process.
6. After you have created and tested 3 (or more) boats, answer the questions beneath the table – *see next page*.

The vehicle of choice for the Mi'kmaq was a birchbark canoe. It had rounded ends and a wide-bottomed interior, and could be used both in freshwater and saltwater. It was built with a softwood frame and a hull made of bark from the paper birch tree, woven together with "rope" made from spruce root. When necessary, the seams would be sealed with spruce gum.
Sea canoes were about 6 to 8.5 m (20 to 28 ft) in length, while freshwater canoes were 2.75 to 4.9 m (9 to 16 ft) long. Despite their significant size, the materials used to build these vessels made them remarkably lightweight, weighing only about 23 kg (50 lbs). This meant they could easily be carried overland from one lake or river to another, a process known as *portaging*. Similar canoes were made by other Algonquian peoples across North America. The design was admired by many European settlers, including the explorer Samuel de Champlain. Today, a small number of skilled Mi'kmaw craftspeople still make birchbark canoes in the traditional style, both for practical use and as decorative pieces. Information found here. Click pictures for videos of canoes being built.

Tinfoil Boat Challenge - *Recording Sheet*

Diagram	Measurements (length, width, height)	Does it float? Yes / No	Describe the weight it holds	Alterations required

A. What is the most weight held by one of your boats?
B. What is the least amount of weight held by one of your boats?
C. How much more weight is held by the strongest versus the weakest boat?
D. What design features enable your best boats to float?
E. What do you think determined the best, strongest boat?

Baking Bannock

A main staple of Indigenous foods, bannock is ever-present in the daily and celebratory occasions that bring family and community together. *Did you know: bannock has a history of keeping without spoiling for a long time, offering tasty sustenance for generations of families living in Canada's harsh climate.*

Basic Bannock Recipe
Yields 12 servings

Ingredients

- 3 cups all-purpose flour
- 1 teaspoon salt
- 2 tablespoons baking powder
- $\frac{1}{4}$ cup butter, melted
- 1 $\frac{1}{2}$ cups water

Directions

1. Measure flour, salt, and baking powder into a large bowl. Stir to mix. Pour melted butter and water over flour mixture. Stir with fork to make a ball.
2. Turn dough out on a lightly floured surface and knead gently about 10 times. Pat into a flat circle $\frac{3}{4}$ to 1 inch thick.
3. Cook in a greased frying pan over medium heat, allowing about 8-15 minutes for each side. Use two lifters for easy turning. May also be baked on a greased baking sheet at 350 degrees F (175 degrees C) for 20 to 30 minutes.

You Did It!

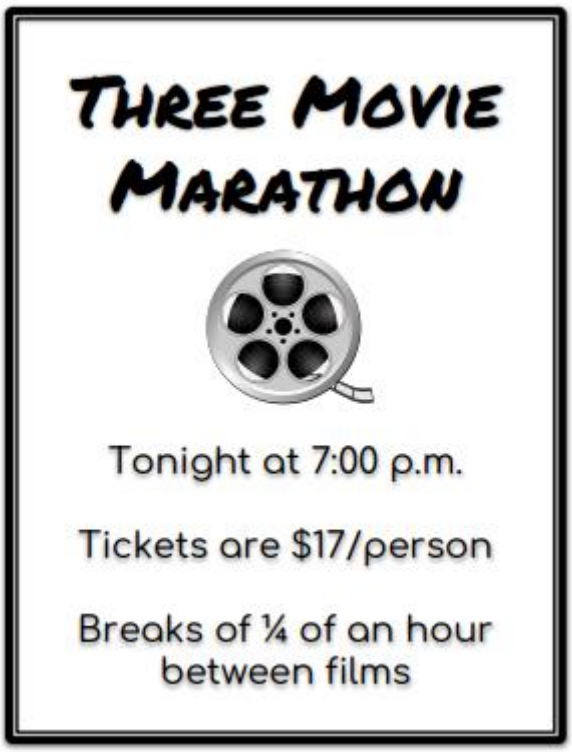
Click here for a brief history of bannock.
Click here for a video about making bannock.

Midnight Movie Madness

https://www.cemc.uwaterloo.ca/resources/potw-strands/2018-19/English/POTWA-18-Combined3-4.pdf (page 67)

Mr. and Mrs. Pretti decide to watch a special three-movie marathon at the local theatre.

- They purchase their tickets at $17 per person.
- They call their favourite babysitter to watch their children.
- Each movie is 125 minutes long.
- The movie theatre breaks for a quarter-hour between each movie.
- Driving to the theatre takes 30 minutes, and the marathon starts at 7 p.m.
- The babysitter arrives at 6:15 p.m.



At approximately what time will Mr. and Mrs. Pretti arrive back home?

The Prettis pay their babysitter $7.50 per hour.
How much will their entire night cost?

What Shapes?

https://www.openmiddle.com/composite-2d-shapes/

What shapes could be used to make this picture? List them below.

Keep a tally of how many of each shape you need.

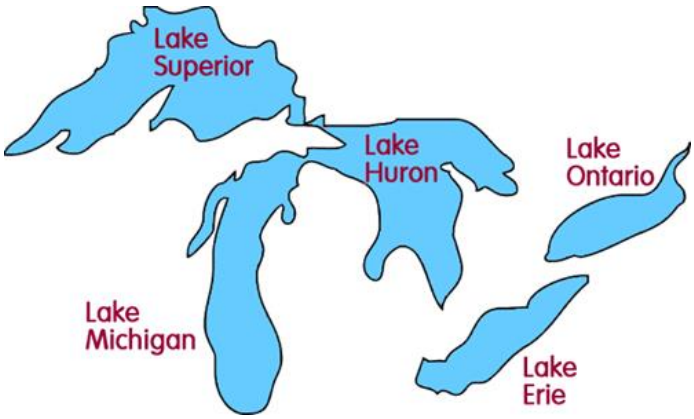
Shape	Tally

NIBI Song

The very least we should do, every day, is speak to the water.
Sing to the water every day. It is sung like a lullaby…

Ne-be Gee Zah- gay- e- goo
Gee Me-gwetch -wayn ne- me – goo
Gee Zah Wayn ne- me- goo

Listen to audio here:
http://www.motherearthwaterwalk.com/?attachment_id=2244



The story of the Nibi (Water) Song, told by Beatrice Menase Kwe Jackson - Migizi Clan. Song writer Doreen Day and her grandson, Mashkoonce, give permission for everyone to share this song.

Decode the song message…

Decode the song message:

Use this key to translate the message in this song from the Ojibwe language to English. Each letter is identified by a column letter and a row number.
Example:

C1 = a
D4 = z

	A	B	C	D	E	F	G	H
1			a	b	c	d	e	f
2	g	h	i	j	k	l	m	n
3	o	p	q	r	s	t	u	v
4	w	x	y	z				

A4	C1	F3	G1	D3		A4	G1		F2	A3	H3	G1		C4	A3	G3
A4	G1		F3	B2	C1	H2	E2		C4	A3	G3					
A4	G1		D3	G1	E3	B3	G1	E1	F3		C4	A3	G3			

Indigenous cultural values hold that waters are precious and sacred to our being. Water is a basic element needed for all life to exist. Click on the icon below for information about walks for water.

Be a Hydrologist: Precipitation Towers

"Precipitation happens when any form of water, liquid or solid, falls from the atmosphere down to the Earth's surface. The amount of water that is deposited from the sky to the ground is not the same throughout the world, a country, or even a city. Some places get rain or snow consistently throughout the year, while others may have strong seasonal patterns. The world's record for average annual rainfall belongs to Mt. Waialeale, Hawaii, which averages about 1140 cm of rain per year. The record for the most rain in a year goes to Cherrapunji, India, where it rained 2300 cm in 1861. Contrast those excessive precipitation amounts with Arica, Chile, where no rain fell for 14 years, and Bagdad, California, where precipitation was absent for 767 consecutive days from October 1912 to November 1914."
Source: NASA – Jet Propulsion Laboratory, California Institute of Technology

Materials:
- ❑ Stacking blocks (Lego or graph paper squares work too)
- ❑ Pencil crayons
- ❑ City Precipitation Template - *see next page*

Instructions:
1. Using your *City Precipitation Template*, stack number of blocks to represent monthly precipitation totals.
2. This creates a graph.
3. Determine the *range* of your data (difference between highest and lowest precipitation totals).
4. What information does your graph provide? *Considerations: tallest block-towers; shortest block-towers; time of year…*
5. Rearrange blocks so every month is about even. What number of blocks makes this happen? This represents the *average* monthly rainfall for your city, in a year. Would you consider this city to be a relatively wet or dry destination?
6. Repeat the process for your other two cities. How do the graphs compare? What can be determined about precipitation in each place?

Extensions:
- ❑ Find precipitation data for a city in a different climate region. How do monthly precipitation patterns compare? Where would you rather live? Why?
- ❑ Put a container outside to measure rainfall for a week. Create a graph to show the daily rainfall and the average weekly rainfall.
    - If this average rainfall occurred every week, what would your *annual* rainfall be?

Some hydrologists work to provide drinking water; others study how to prevent flooding and droughts; and sometimes they use dams to create electricity.

Watch this video to learn more about what a hydrologist does.

Both NASA and hydrologists use rainfall information, from weather maps, to predict severe flooding and droughts.

Watch this video to learn more about predicting floods and landslides.

Precipitation Towers: Ottawa, Ontario

Stack blocks in these spaces based on how much precipitation is measured each month.

January	February	March	April	May	June	July	August	September	October	November	December

Precipitation per month in centimeters - Ottawa, Ontario, 2019 Source

January	February	March	April	May	June	July	August	September	October	November	December
7 cm	7 cm	8 cm	8 cm	9 cm	11 cm	10 cm	10 cm	10 cm	8 cm	9 cm	10 cm

Precipitation Towers: Halifax, Nova Scotia

Stack blocks in these spaces based on how much precipitation is measured each month.

January	February	March	April	May	June	July	August	September	October	November	December

Precipitation per month in centimeters - Halifax, Nova Scotia, 2019 Source

January	February	March	April	May	June	July	August	September	October	November	December
14 cm	9 cm	12 cm	18 cm	13 cm	16 cm	3 cm	5 cm	8 cm	10 cm	22 cm	15 cm

Precipitation Towers: Prince George, British Columbia

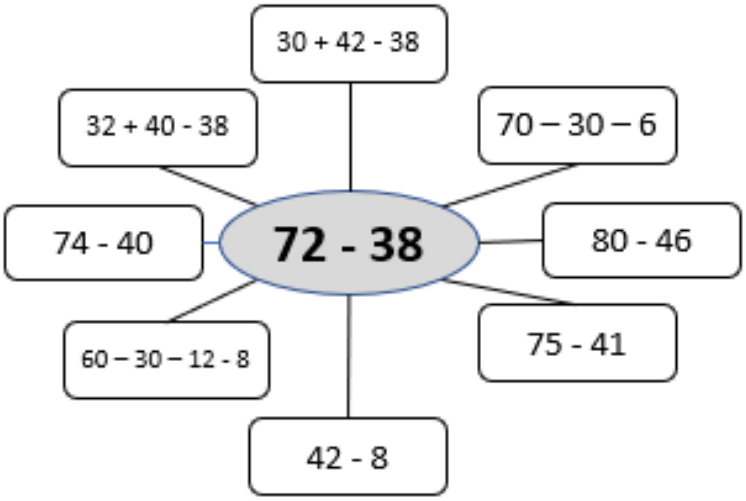
Stack blocks in these spaces based on how much precipitation is measured each month.

January	February	March	April	May	June	July	August	September	October	November	December

Precipitation per month in centimeters - Prince George, British Columbia, 2019 Source

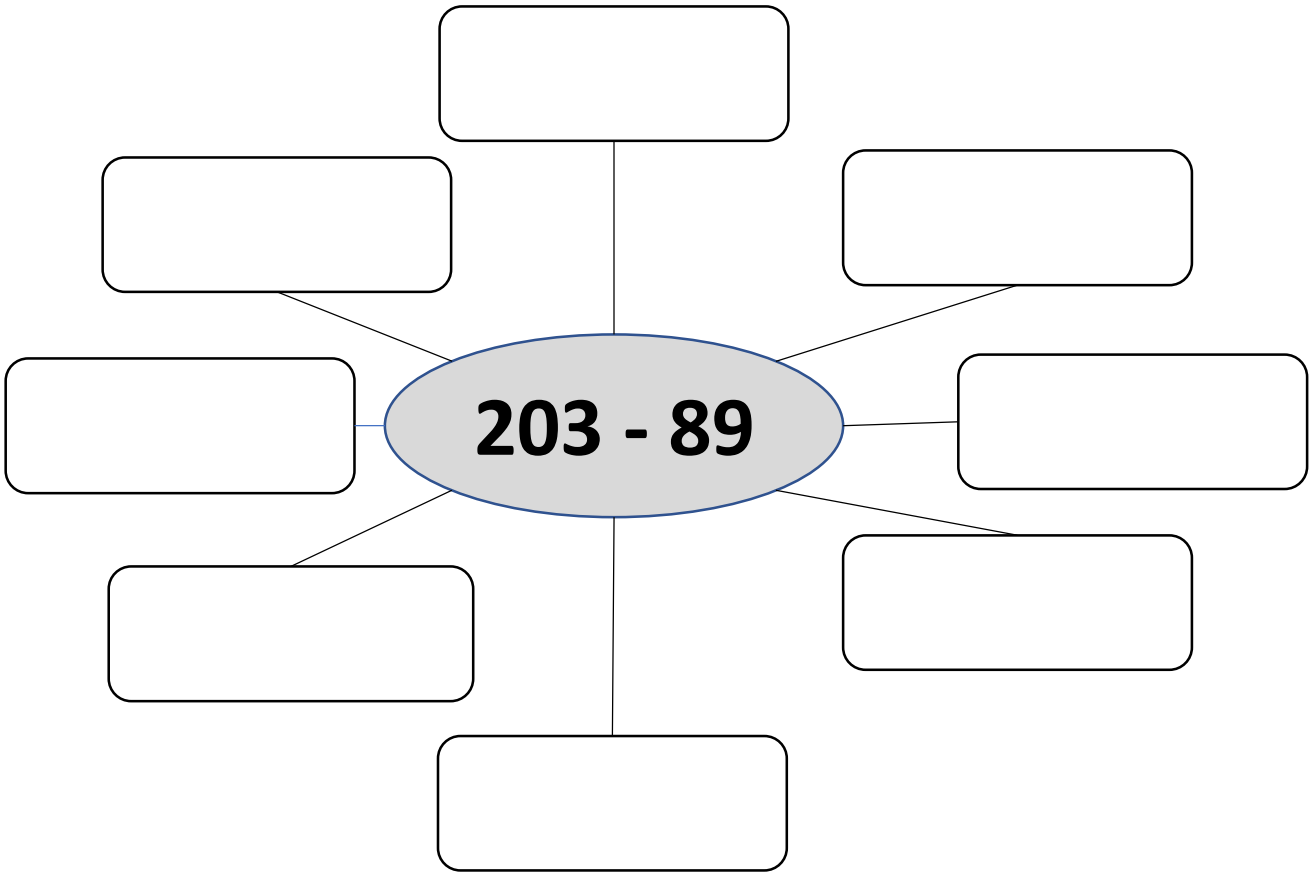
January	February	March	April	May	June	July	August	September	October	November	December
3 cm	0 cm	1 cm	1 cm	0 cm	2 cm	9 cm	7 cm	6 cm	5 cm	7 cm	3 cm

Mental Math: How do you see it?



It's important to be *flexible* in how we work with numbers. Mental math can often be done quickly, if we have a strategy for solving the problem. Being flexible about working with numbers helps us solve problems quickly and efficiently. Each person may have a different favourite strategy.

Determine different ways to solve 203 – 89. Which strategy is your favourite? Why?



Grades 1 - 3 Curriculum Continuum Connections

Note: highlighted expectations are addressed in this menu

	Grade 1	Grade 2	Grade 3
Process Skills	❑ Problem Solving ❑ Reasoning and Proving	❑ Reflecting ❑ Selecting Tools and Computational Strategies ❑ Connecting	❑ Representing ❑ Communicating
Number Sense and Numeration	❒ read, represent, compare, and order whole numbers to 50, and use concrete materials to investigate fractions and money amounts ❒ demonstrate an understanding of magnitude by counting forward to 100 and backwards from 20; ❒ solve problems involving the addition and subtraction of single-digit whole numbers, using a variety of strategies.	❒ read, represent, compare, and order whole numbers to 100, and use concrete materials to represent fractions and money amounts to 100¢ ❒ demonstrate an understanding of magnitude by counting forward to 200 and backwards from 50, using multiples of various numbers as starting points ❒ solve problems involving the addition and subtraction of one- and two-digit whole numbers, using a variety of strategies, and investigate multiplication and division.	❑ read, represent, compare, and order whole numbers to 1000, and use concrete materials to represent fractions and money amounts to $10 ❑ demonstrate an understanding of magnitude by counting forward and backwards by various numbers and from various starting points ❑ solve problems involving the addition and subtraction of single- and multi-digit whole numbers, using a variety of strategies, and demonstrate an understanding of multiplication and division.
Patterning and Algebra	❒ identify, describe, extend, and create repeating patterns ❒ demonstrate an understanding of the concept of equality, using concrete materials and addition and subtraction to 10	❒ identify, describe, extend, and create repeating patterns, growing patterns, and shrinking patterns ❒ demonstrate an understanding of the concept of equality between pairs of expressions, using concrete materials, symbols, and addition and subtraction to 18	❒ describe, extend, and create a variety of numeric patterns and geometric patterns ❒ demonstrate an understanding of equality between pairs of expressions, using addition and subtraction of one- and two-digit numbers
Measurement	❒ estimate, measure, and describe length, area, mass, capacity, time, and temperature, using non-standard units of the same size ❒ compare, describe, and order objects, using attributes measured in non-standard units	❒ estimate, measure, and record length, perimeter, area, mass, capacity, time, and temperature, using non-standard units and standard units ❒ compare, describe, and order objects, using attributes measured in non-standard units and standard units	❒ estimate, measure, and record length, perimeter, area, mass, capacity, time, and temperature, using standard units; ❒ compare, describe, and order objects, using attributes measured in standard units
Geometry and Spatial Sense	❒ identify common two-dimensional shapes and three-dimensional figures and sort and classify them by their attributes ❒ compose and decompose common two-dimensional shapes and three-dimensional figures ❒ describe the relative locations of objects using positional language	❒ identify two-dimensional shapes and three-dimensional figures and sort and classify them by their geometric properties ❒ compose and decompose two-dimensional shapes and three-dimensional figures ❒ describe and represent the relative locations of objects, and represent objects on a map	❒ compare two-dimensional shapes and three-dimensional figures and sort them by their geometric properties ❒ describe relationships between two-dimensional shapes, and between two-dimensional shapes and three-dimensional figures ❒ identify and describe the locations and movements of shapes and objects.
Data Management and Probability	❒ collect and organize categorical primary data and display the data using concrete graphs and pictographs without regard to the order of labels on the horizontal axis ❒ read and describe primary data presented in concrete graphs and pictographs ❒ describe the likelihood that everyday events will happen	❒ collect and organize categorical or discrete primary data and display the data, using tally charts, concrete graphs, pictographs, line plots, simple bar graphs, and other graphic organizers, with labels ordered appropriately along horizontal axes, as needed ❒ read and describe primary data presented in tally charts, concrete graphs, pictographs, line plots, simple bar graphs, and other graphic organizers ❒ describe probability in everyday situations and simple games	❒ collect and organize categorical or discrete primary data and display the data using charts and graphs, including vertical and horizontal bar graphs, with labels ordered appropriately along horizontal axes, as needed ❒ read, describe, and interpret primary data presented in charts and graphs, including vertical and horizontal bar graphs ❒ predict and investigate the frequency of a specific outcome in a simple probability experiment