UBC Faculty of Education
Teacher Candidate Professional Development Conference
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Connecting the Dots: Stories of Enactment of the BC Curriculum

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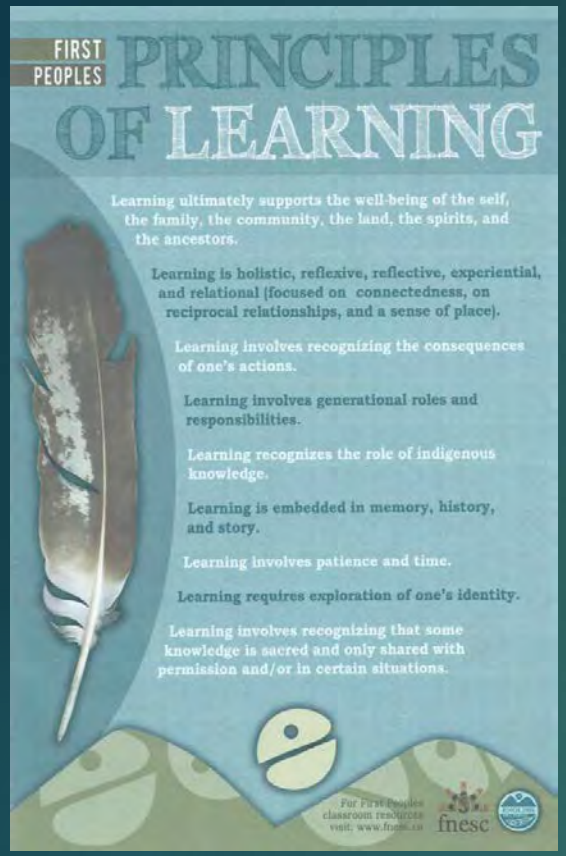
RICHMOND SCHOOL DISTRICT NO.38



BIG IDEAS

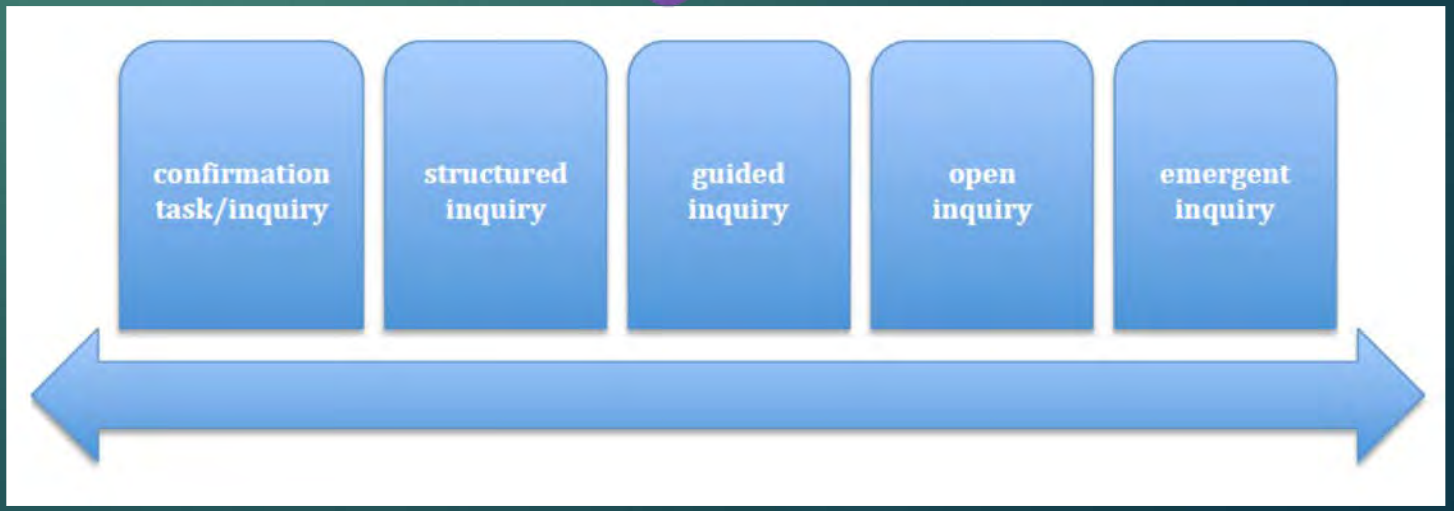
C T PS

Core Competencies

- **Flexible Learning Environments**
  BC's redesigned curriculum provides teachers with great flexibility in creating learning environments that are relevant, engaging, and novel. Flexible learning environments give consideration to local contexts and place-based learning.

inclusion

eportfolio



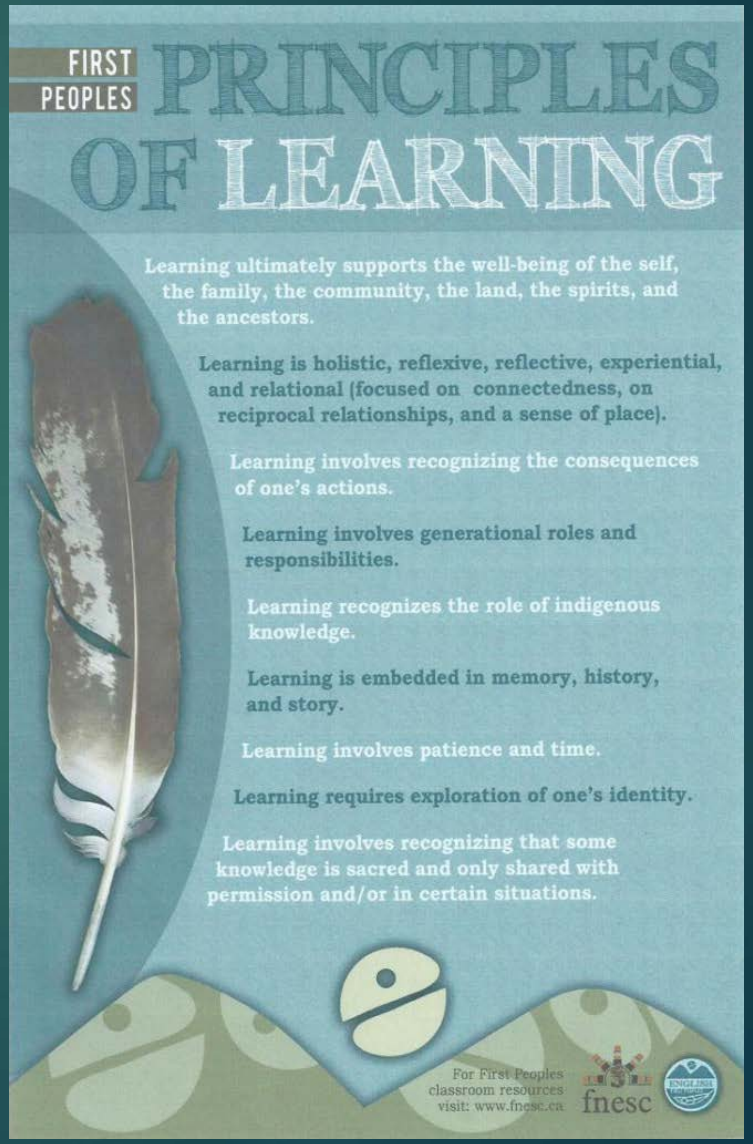
- The most important connection you will nurture is the relationship between you and your students.

Core Competencies

- notice
- name
- nurture

First Peoples Principles of Learning

- story
- place
- identity



Nurturing Inquiry

- *What are you curious about?*
- *What are you wondering about?*
- *What has sparked your interest?*
- *What might you investigate today?*
- *How are you going to dig deeper with your learning about _____?*

Planning and Assessing with the curricular competencies in mind

Social Studies

- Use Social Studies inquiry processes and skills to ask questions; gather, interpret, and analyze ideas; and communicate findings and decisions
- Explain why people, events, or places are significant to various individuals and groups (significance)
- Ask questions, make inferences, and draw conclusions about the content and features of different types of sources (evidence)

Mathematics

Understanding and solving

- Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving
- Visualize to explore mathematical concepts
- Develop and use multiple strategies to engage in problem solving
- Engage in problem-solving experiences that are connected to place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures

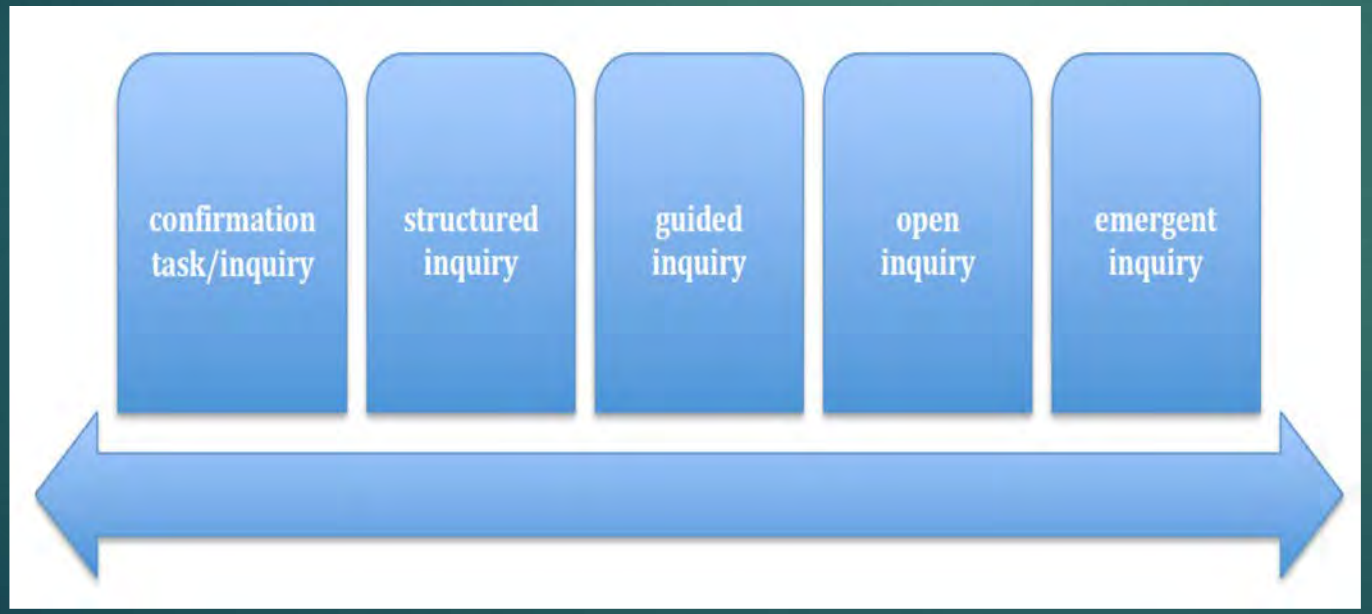
Science

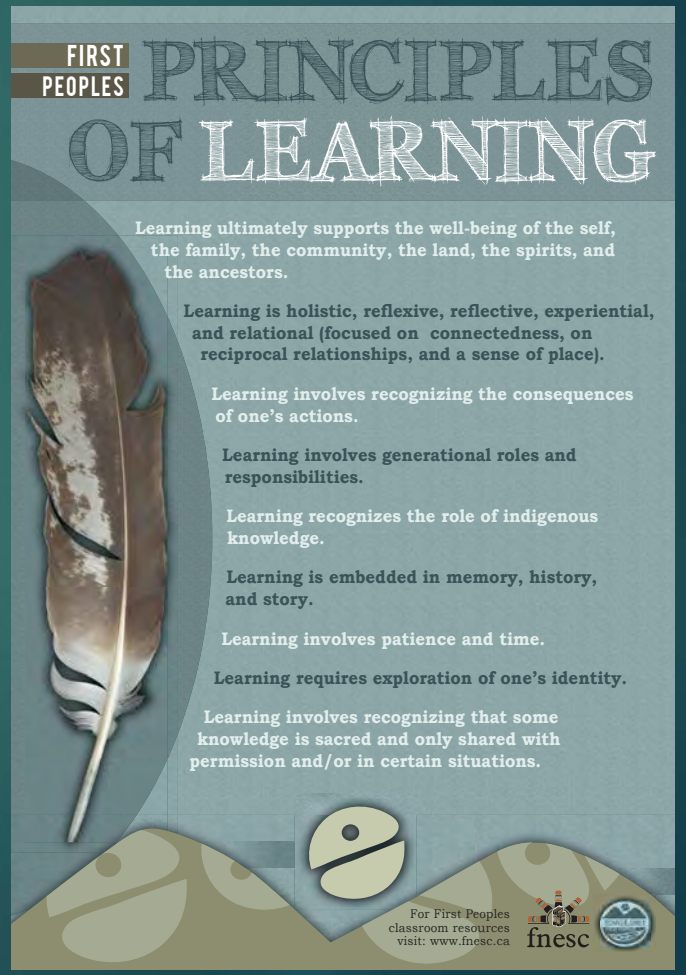
Questioning and predicting

- Demonstrate curiosity and a sense of wonder about the world
- Observe objects and events in familiar contexts
- Ask questions about familiar objects and events
- Make simple predictions about familiar objects and events

Where does inquiry live in the curricular competencies?

being mindful and planning intentionally with opportunities for…





Storytelling

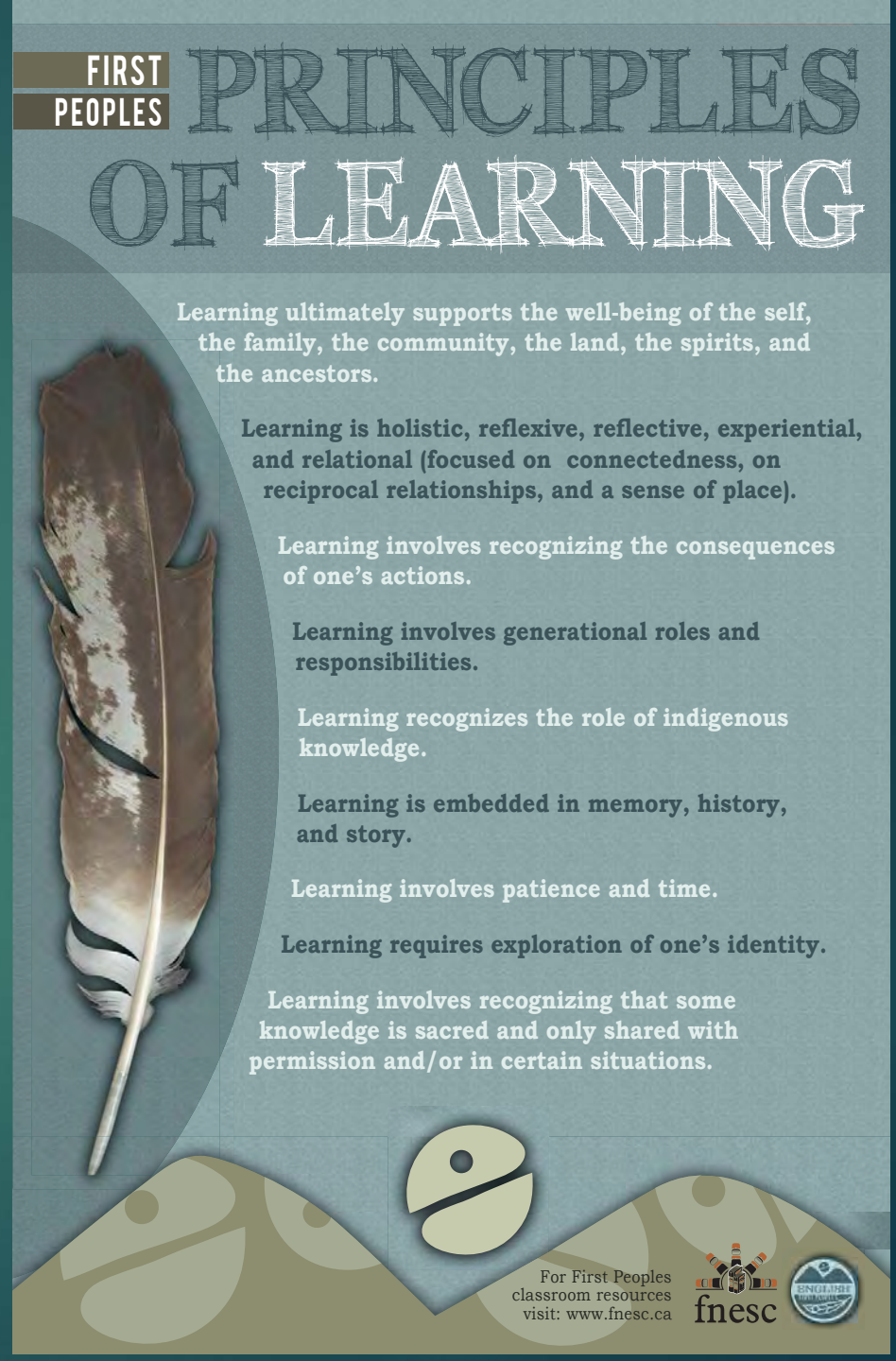
Playful Storytelling

Story.

- *The connective thread between all of us.*

~Richard Wagamese

memory, history, story
land, place
identity
connected, holistic
reflective, relational
experiential



Big Ideas & Questions

- *What stories live within you?*
- *How do stories help us understand ourselves and each other?*
- *How do we capture pieces of ourselves in our stories?*
- *What stories live within this place?*
- *What is the power of stories?*

How do materials inspire stories?
What stories live within these materials?

Storytelling encourages…

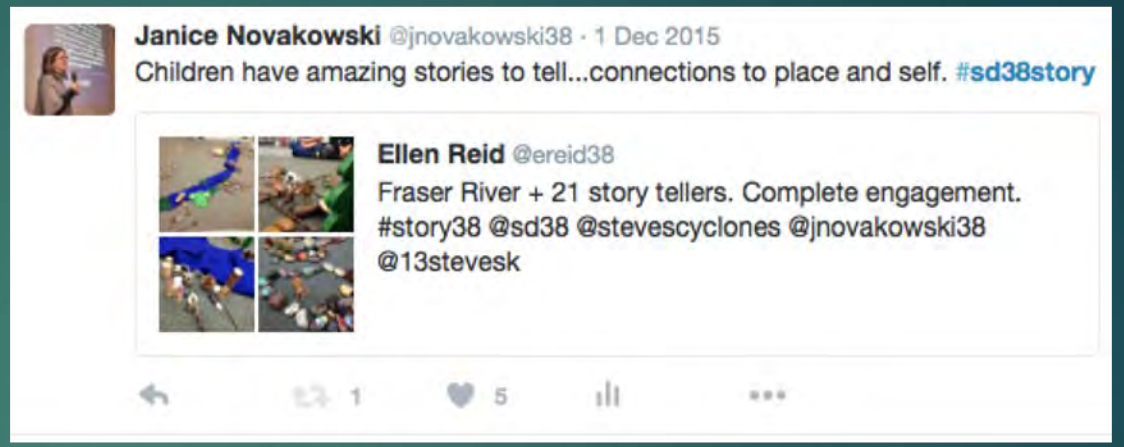
- connections to self, others and place
- thinking and listening
- playing with language and ideas

Symbols & Storyboards

Similes, Metaphors and Themes

#sd38story


Little Blair Dragons
@kindlemoments
Following
Getting ready for story workshop, inspired by the story "The Little Hummingbird". @BlairDragons #sd38
RETWEET 1
LIKES 5


Janice Novakowski @jnovakowski38 · 1 Dec 2015
Children have amazing stories to tell...connections to place and self. #sd38story
Ellen Reid @ereid38
Fraser River + 21 story tellers. Complete engagement. #story38 @sd38 @stevescyclones @jnovakowski38 @13stevesk
1
5


Janice Novakowski @jnovakowski38 · Feb 12
Grade 6&7 students at @homma_school creating stories inspired by place. @ritchie_pm #sd38story
9
20


Sarah Loat and 1 other Retweeted
Peter Ritchie @ritchie_pm · Feb 24
What stories live in these places? @homma_school #sd38story
3
5

All that we are is story.
~Richard Wagamese

- "All that we are is story. From the moment we are born to the time we continue on our spirit journey, we are involved in the creation of the story of our time here. It is what we arrive with. It is all we leave behind. We are not the things we accumulate. We are not the things we deem important. We are story. All of us. What comes to matter then is the creation of the best possible story we can while we're here; you, me, us, together. When we can do that and we take the time to share those stories with each other, we get bigger inside, we see each other, we recognize our kinship – we change the world, one story at a time…"

- *"Stories help us understand each other."*

~grade 4 student

Digital Storytelling

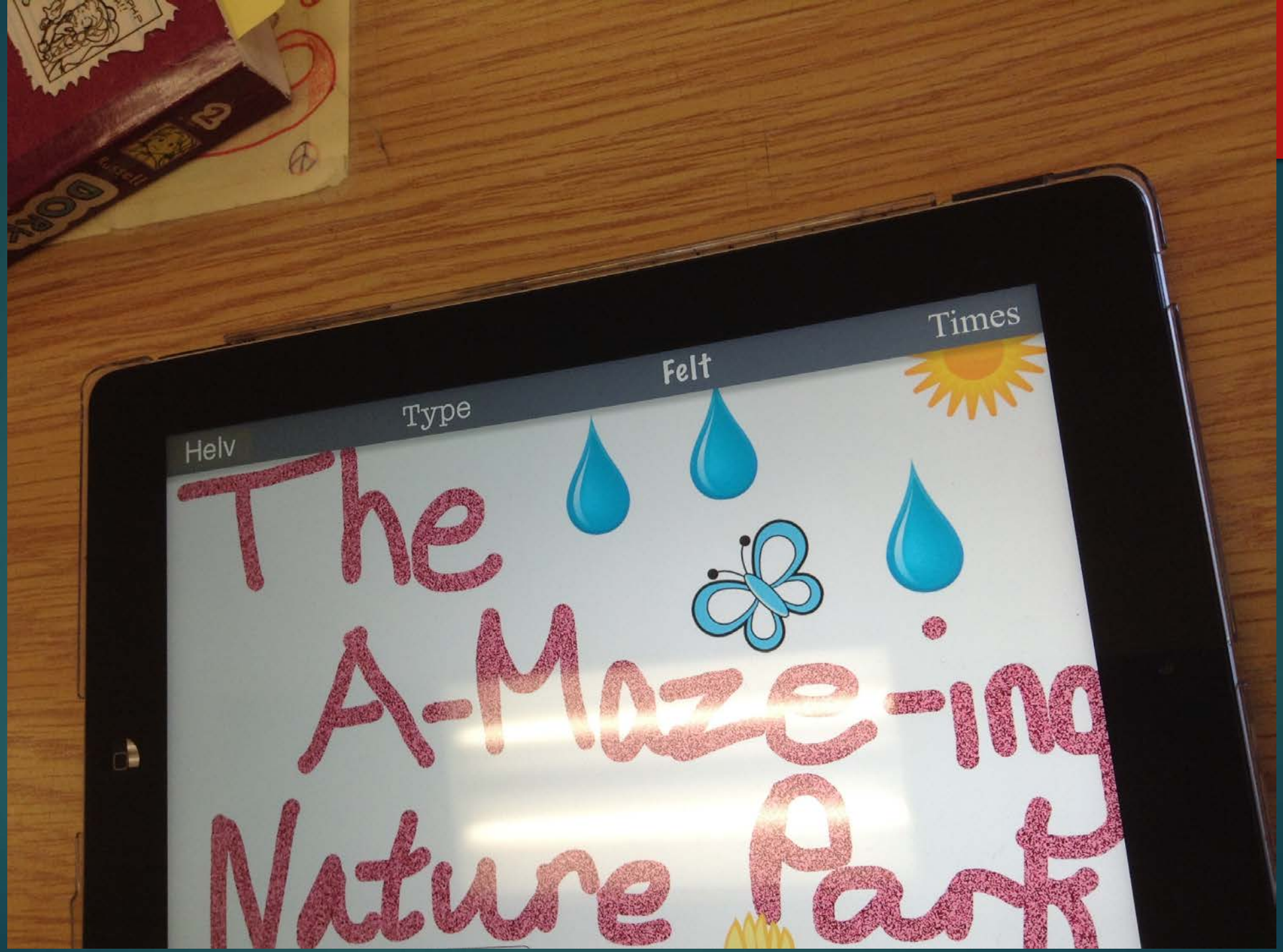
What is place-based pedagogy?

- Place is any environment, locality or context with which people interact to learn, create memory, reflect on history, connect with culture and establish identity.

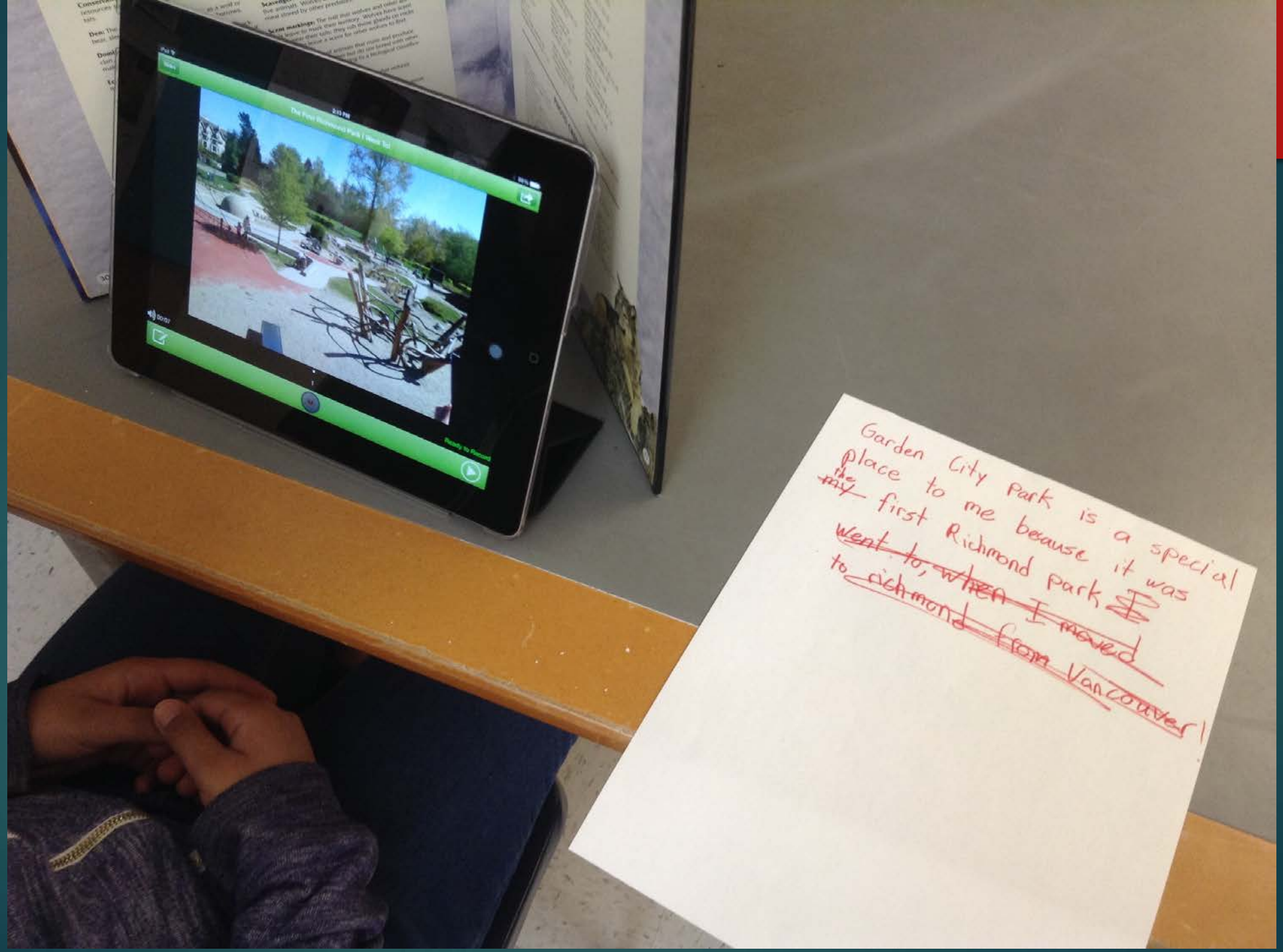
  BC Science Curriculum, 2015

- *How does place inform your questions and inquiries?*
- *How does place inspire connections, thinking and stories?*


iPad
13:40
93%
Welcome to Google Earth. Let's get started on some basic ways to navigate Earth.
Google earth
© 2016 Google


Helv
Type
Felt
Times
The
A-Maze-ing
Nature Part


My Special Places


Garden City Park is a special
place to me because it was
the
my first Richmond park I
Went to, when I moved
to richmond from Vancouver!

BC Curriculum Connections

- **Major tenets:** inquiry-based approaches to teaching and learning, First Peoples Principles of Learning, personalized learning, competency-based, digital technology, place-based learning

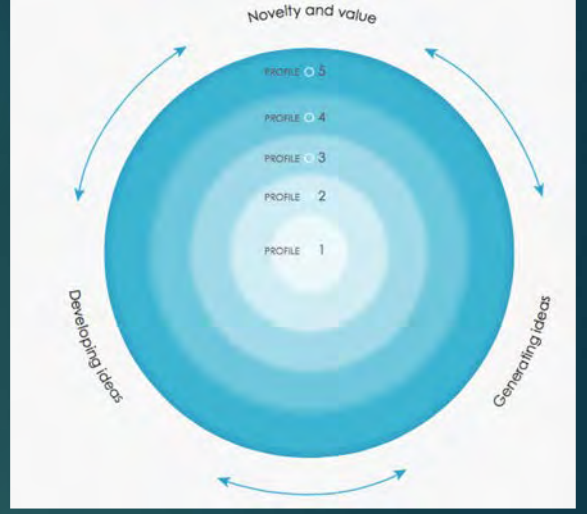
- **English Language Arts, Social Studies and Science Curriculum Frameworks**
  - Big Ideas
  - Curricular Competencies
  - Curricular Content

playful storytelling grades 2&3

Stories help us learn about ourselves, our families, and our communities.

Indigenous knowledge is passed down through oral history, traditions, and collective memory.

Creative Thinking



Learning is embedded in memory, history, and story.

- Express and reflect on personal or shared experiences of place

Create and communicate

- Create stories and other age-appropriate texts to deepen awareness of self, family, and community
- Plan and create a variety of communication forms for different purposes and audiences

Communication

Content

Students are expected to know the following:

- Story/text:
  - elements of story
  - literary elements and devices
  - text features
  - vocabulary associated with texts

Content

Students are expected to know the following:

- biodiversity in the local environment
- Aboriginal knowledge of ecosystems

the role of story and place throughout the curriculum…

- Consider the power of story and place in social studies, science and math
  - How are we connected to place?
  - Where does math live here?
  - What stories does science help us think about?

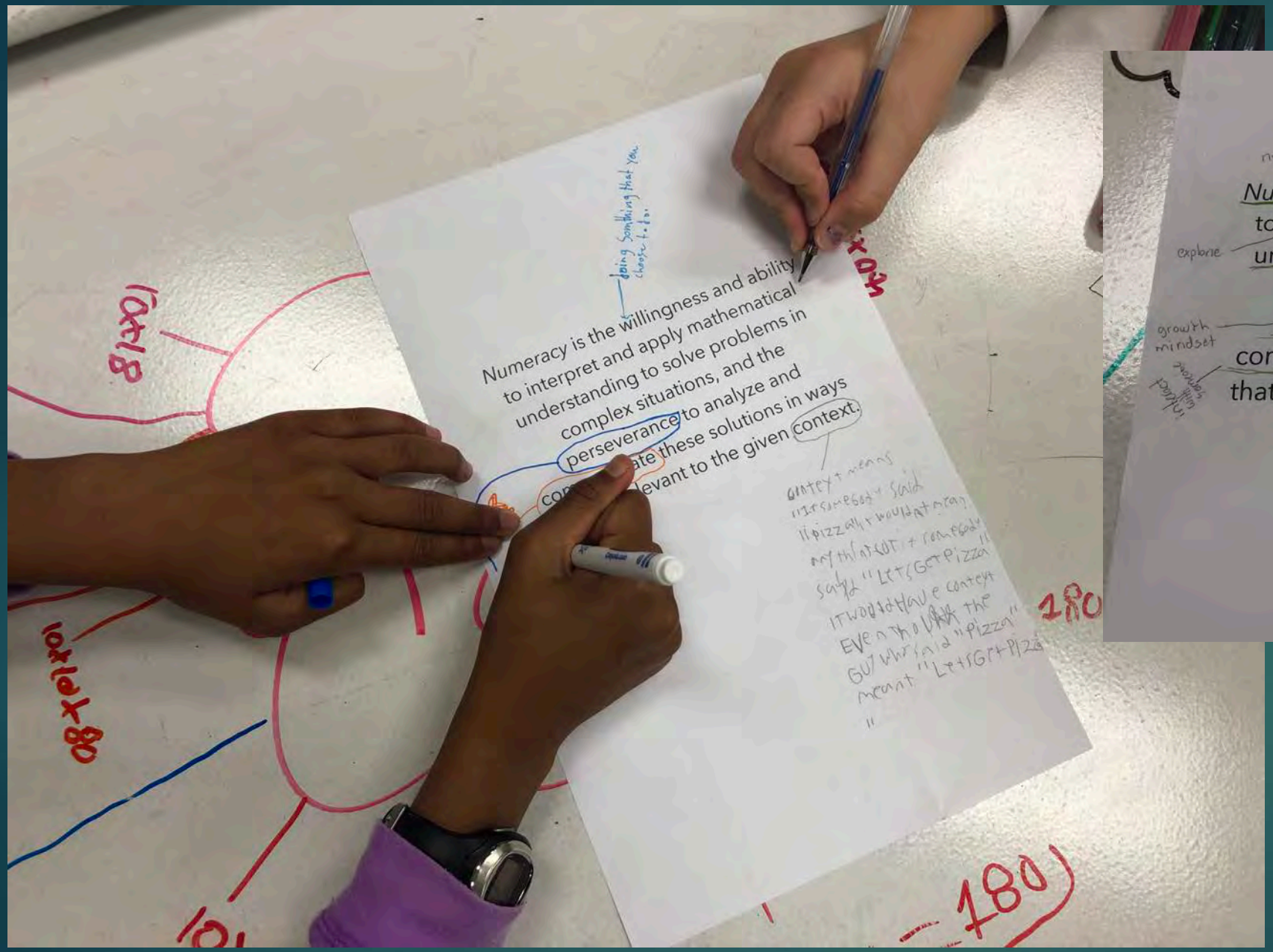
What connections are you making?

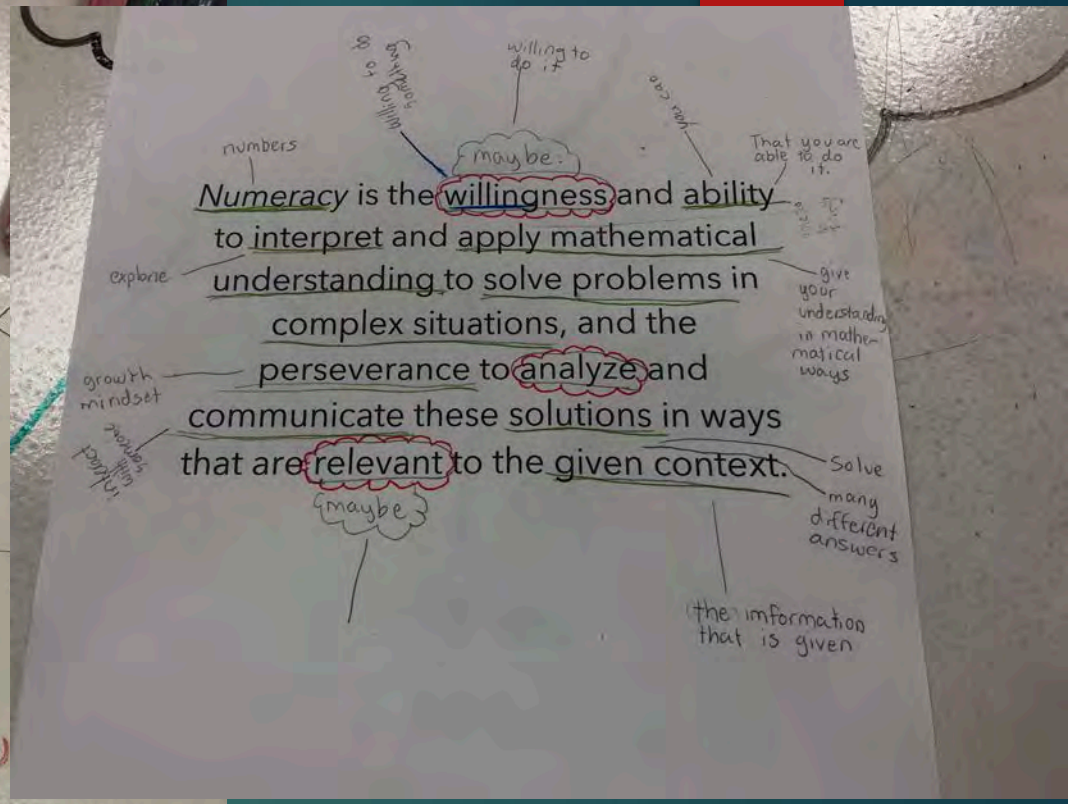
Numeracy

What is numeracy?

- *Numeracy* is the willingness and ability to interpret and apply mathematical understanding to solve problems in complex situations, and the perseverance to analyze and communicate these solutions in ways that are relevant to the given context.

BC Ministry of Education


Numeracy is the willingness and ability to interpret and apply mathematical understanding to solve problems in complex situations, and the perseverance to analyze and communicate these solutions in ways that are relevant to the given context.
180


Numeracy is the willingness and ability to interpret and apply mathematical understanding to solve problems in complex situations, and the perseverance to analyze and communicate these solutions in ways that are relevant to the given context.
maybe
maybe
numbers
explore
growth mindset
Solve
many different answers
(the) information that is given

Autumn Peltier
Indigenous Water Advocate

- *"All across these lands, we know somewhere where someone can't drink the water. Why so many, and why have they gone without for so long?"*

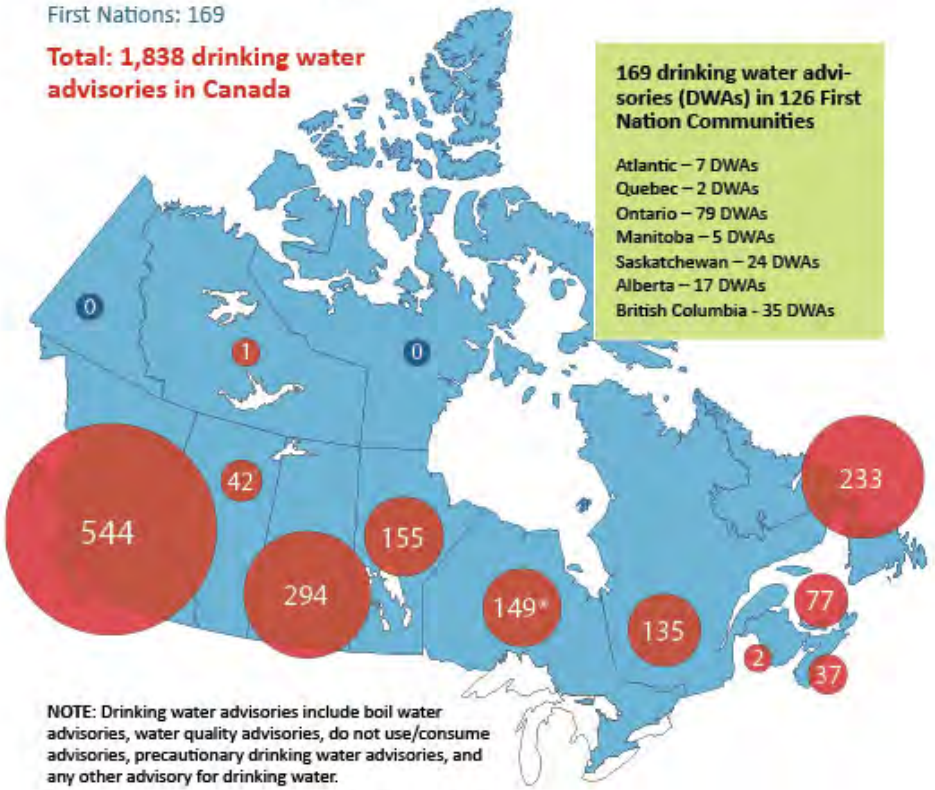
Autumn Peltier, 15 years old, Wiikwemkoong First Nation

Drinking water advisories by jurisdiction

Provinces and territories: 1,669

First Nations: 169

Total: 1,838 drinking water advisories in Canada

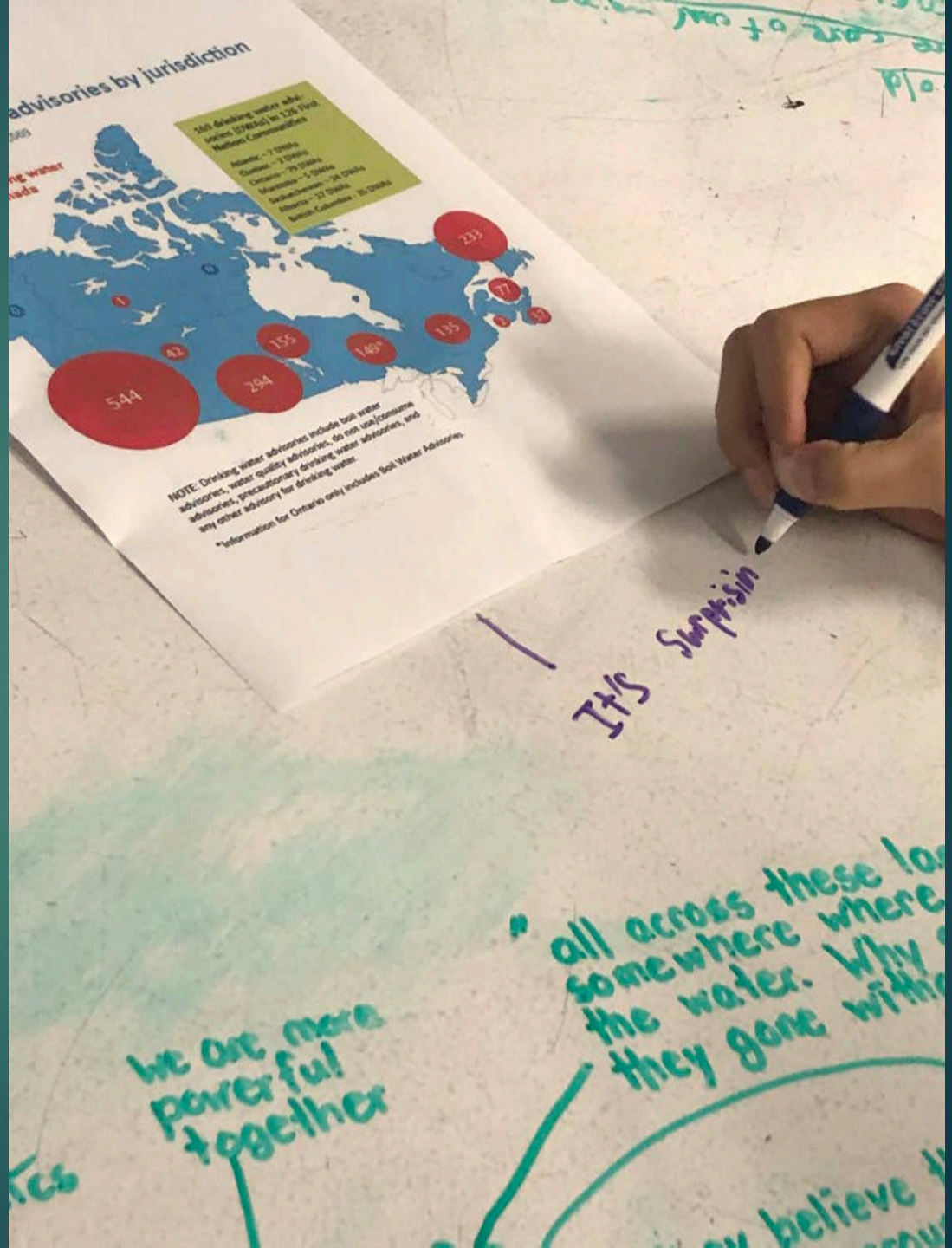


169 drinking water advisories (DWAs) in 126 First Nation Communities

Atlantic – 7 DWAs
Quebec – 2 DWAs
Ontario – 79 DWAs
Manitoba – 5 DWAs
Saskatchewan – 24 DWAs
Alberta – 17 DWAs
British Columbia - 35 DWAs

NOTE: Drinking water advisories include boil water advisories, water quality advisories, do not use/consume advisories, precautionary drinking water advisories, and any other advisory for drinking water.

*Information for Ontario only includes Boil Water Advisories.



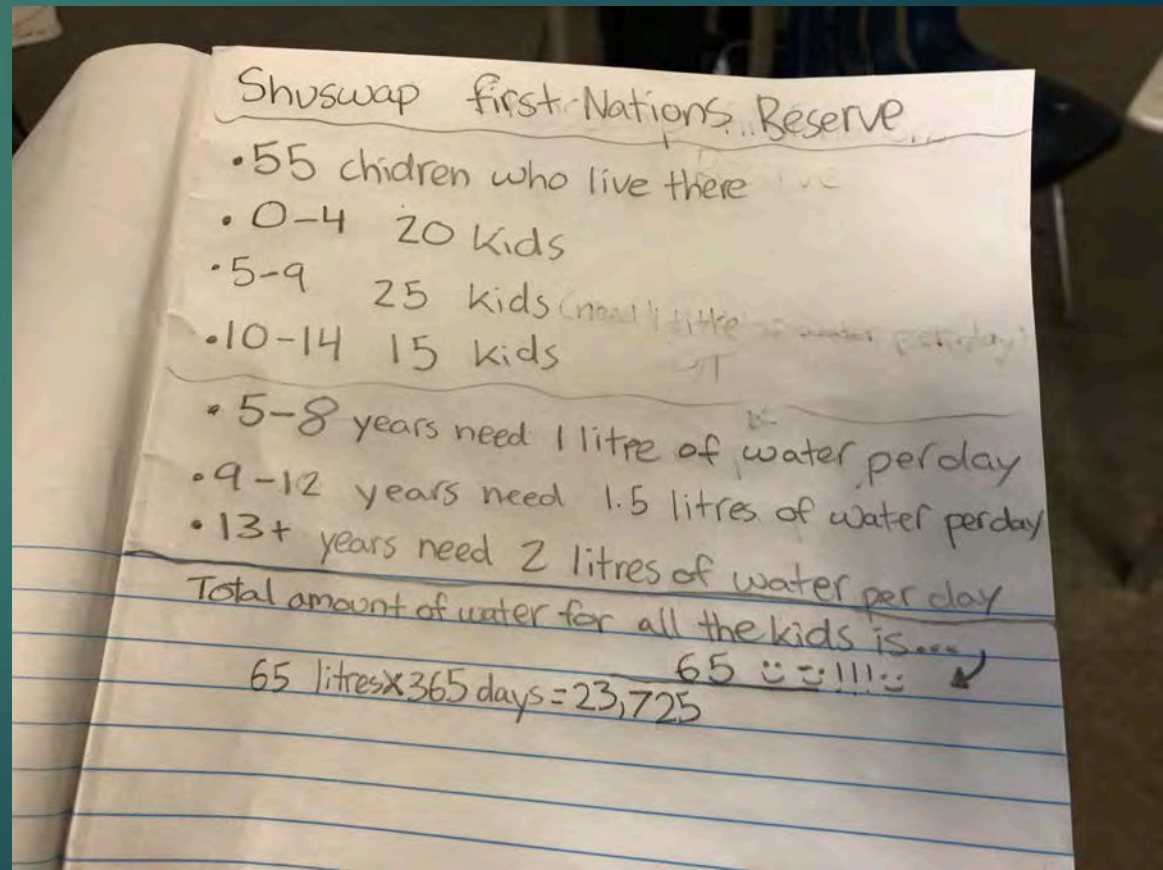
How much water will be needed for the daily needs of all the children for one year in one of the First Nations communities affected by a drinking water advisory?

WHAT DO WE KNOW	WHAT DO WE NEED TO KNOW	WHAT DECISIONS/ASSUMPTIONS NEED TO BE MADE

Consider: sources of data and information

Explain and justify your solution.


Population
0-14 60
How much water?
Cold water
Do not
COMSUM


Shuswap first Nations Reserve
•55 chidren who live there
• 0-4 20 kids
•5-9 25 kids
•10-14 15 kids
• 5-8 years need 1 litre of water per day
•9-12 years need 1.5 litres of water per day
•13+ years need 2 litres of water per day
Total amount of water for all the kids is...
65 litres x 365 days = 23,725
65 !!!

What next?

- What is the Canadian government's plan for the water crisis in First Nations communities?
- What water issues do we have locally?
- Is there safe drinking water for all in our community?

WATER, WATER EVERYWHERE!

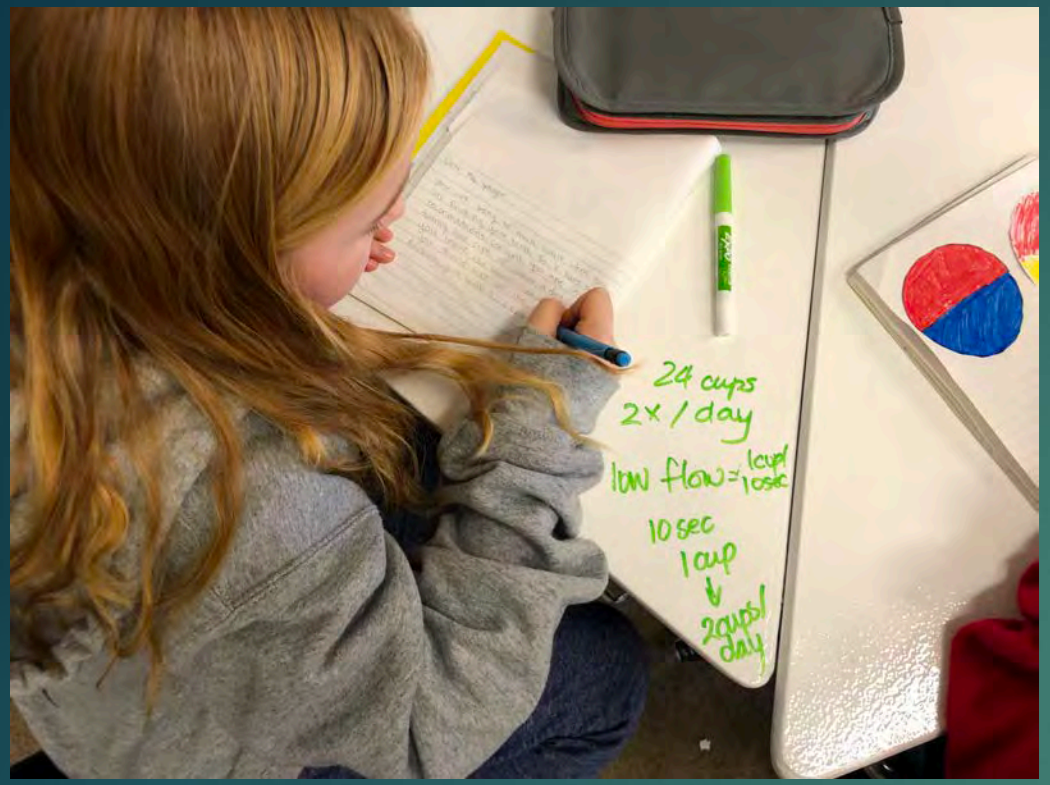
You are in charge of a water conservation awareness campaign for our school. You have surveyed the following 12 students and have determined that they brush their teeth as listed below. Use this information to estimate the water that could be conserved if they changed their water usage habits.

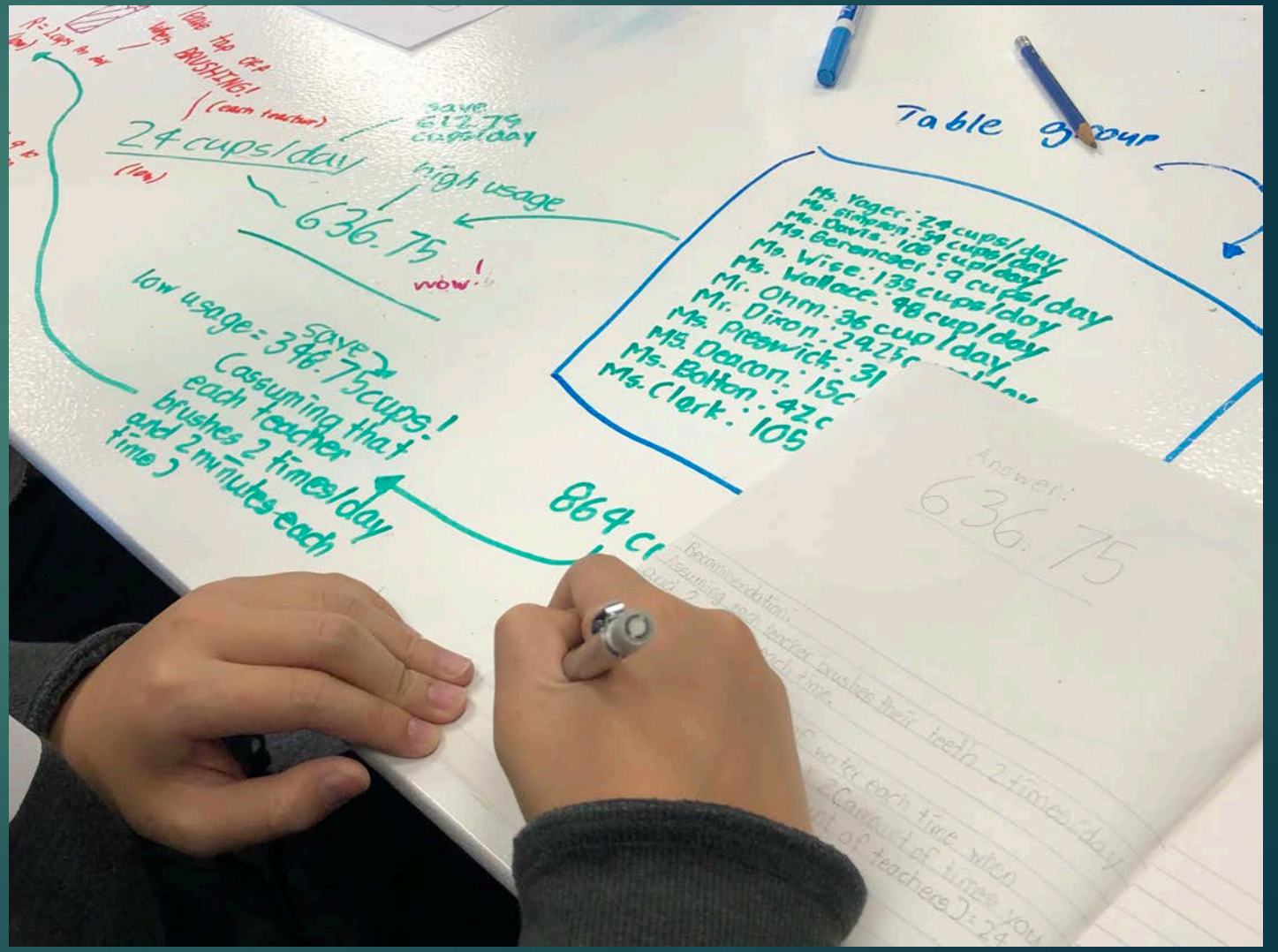
All students currently leave the water running at high flow for the entire time they brush their teeth.

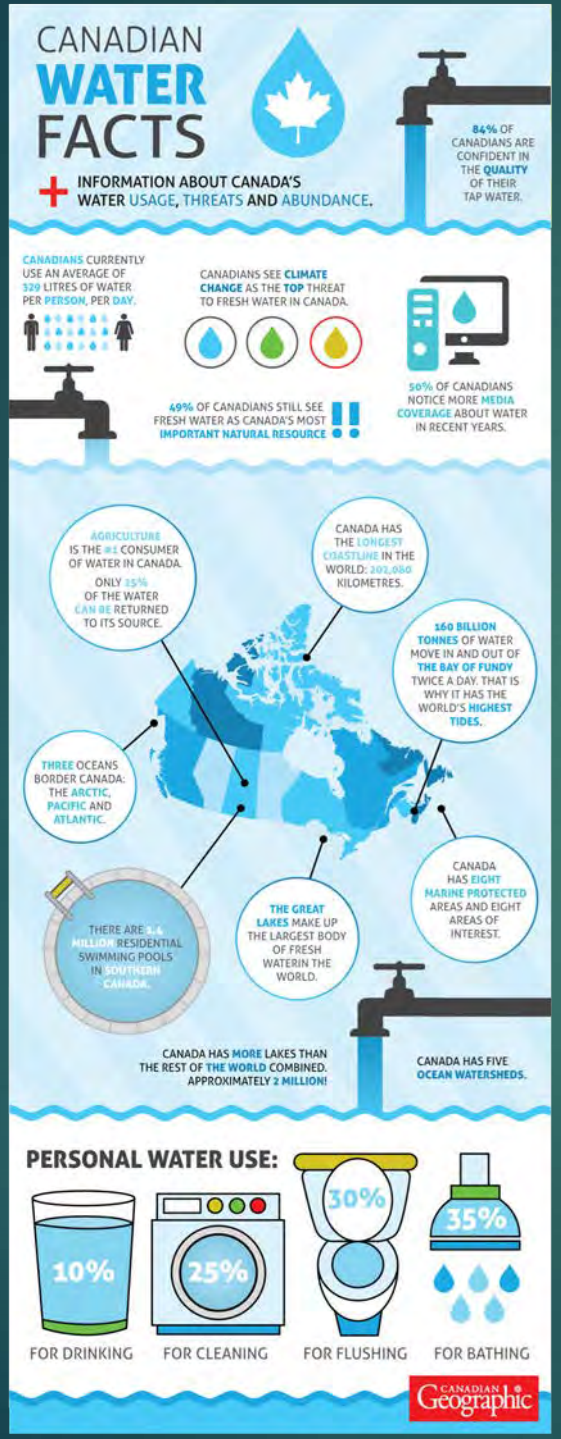
Water usage flow rates:

- Off - 0 cups/sec.
- Low - 1 cup/10 sec.
- High - 3 cups/10 sec.

Student name:	**Frequency of brushing:**	**Duration of Brushing:**
Johnny	2 times/day	40 sec.
Suzie	after every meal	1 minute
Joanna	3 times/day	2 minutes
George	1 time/day	30 sec.
Polly	after every time she eats	1 minute 30 sec.
Heather	2 times/day	1 minute 20 sec.
Catherine	1 time/day	2 minutes
Billy	Once every other day	195 seconds
Lana	3 times/day	35 seconds
Shane	every morning	50 seconds
Uma	twice	1 minute 10 sec.
Bob	5 times/day	70 seconds

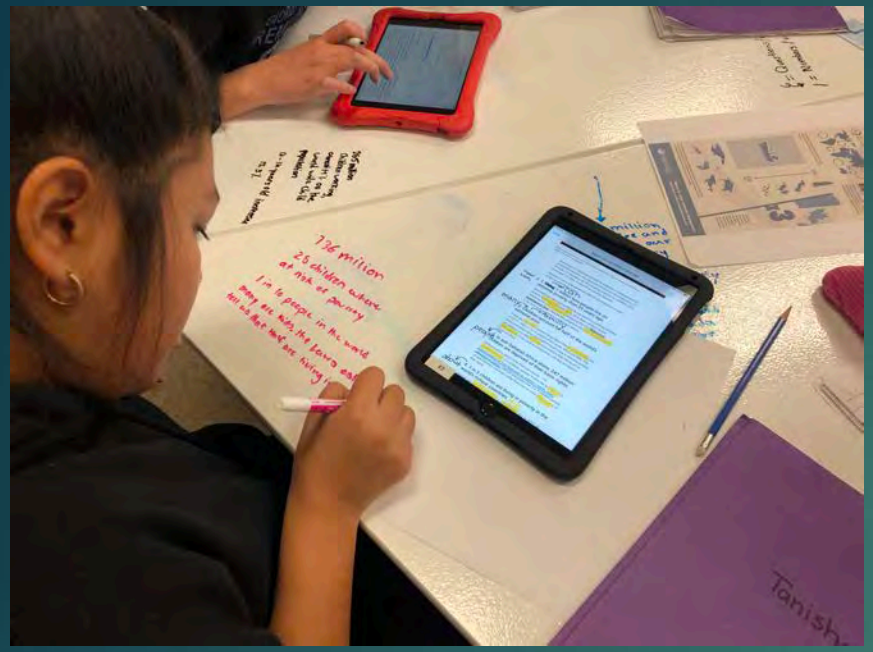

24 cups
2x / day
low flow = 1cup/10sec
10 sec
1 cup
2 cups/day

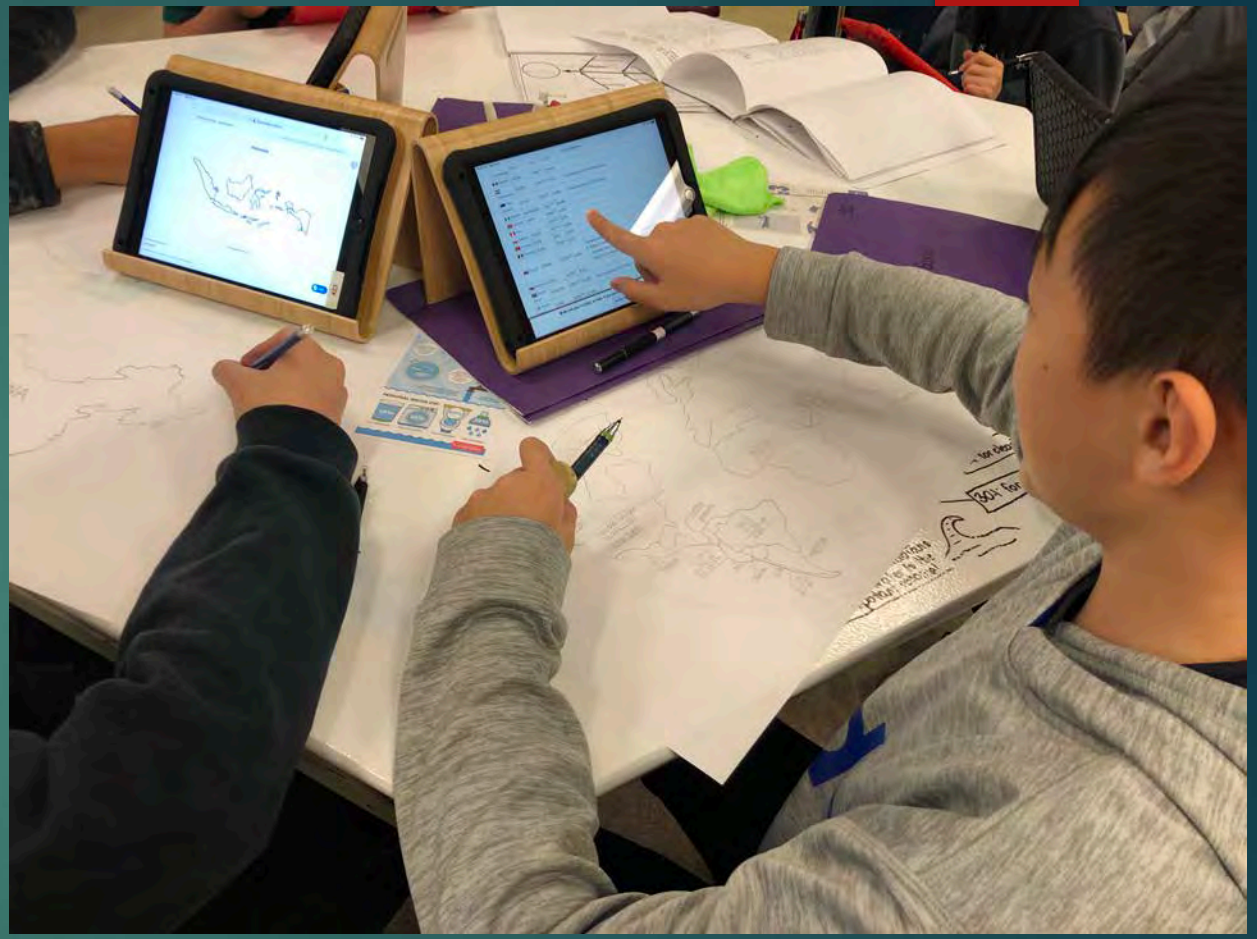

24 cups/day
(low)
636.75
wow!
high usage
low usage: save 348.75 cups!
Assuming that each teacher brushes 2 times/day and 2 minutes each time)
Table group
Ms. Yager: 24 cups/day
Ms. Emerson: 54 cups/day
Ms. Davis: 108 cup/day
Ms. Berenger: 9 cups/day
Ms. Wise: 135 cups/day
Ms. Wallace: 98 cup/day
Mr. Ohm: 36 cup/day
Mr. Dixon: 24.25c
Ms. Prewick: 31
Ms. Deacon: 15c
Ms. Bolton: 42c
Ms. Clark: 105
Answer: 636.75


CANADIAN
WATER
FACTS
+ INFORMATION ABOUT CANADA'S WATER USAGE, THREATS AND ABUNDANCE.
84% OF CANADIANS ARE CONFIDENT IN THE QUALITY OF THEIR TAP WATER.
CANADIANS CURRENTLY USE AN AVERAGE OF 329 LITRES OF WATER PER PERSON, PER DAY.
CANADIANS SEE CLIMATE CHANGE AS THE TOP THREAT TO FRESH WATER IN CANADA.
49% OF CANADIANS STILL SEE FRESH WATER AS CANADA'S MOST IMPORTANT NATURAL RESOURCE
50% OF CANADIANS NOTICE MORE MEDIA COVERAGE ABOUT WATER IN RECENT YEARS.
AGRICULTURE IS THE #1 CONSUMER OF WATER IN CANADA.
ONLY 25% OF THE WATER CAN BE RETURNED TO ITS SOURCE.
CANADA HAS THE LONGEST COASTLINE IN THE WORLD: 202,080 KILOMETRES.
160 BILLION TONNES OF WATER MOVE IN AND OUT OF THE BAY OF FUNDY TWICE A DAY. THAT IS WHY IT HAS THE WORLD'S HIGHEST TIDES.
THREE OCEANS BORDER CANADA: THE ARCTIC, PACIFIC AND ATLANTIC.
THERE ARE 3.4 MILLION RESIDENTIAL SWIMMING POOLS IN SOUTHERN CANADA.
THE GREAT LAKES MAKE UP THE LARGEST BODY OF FRESH WATERIN THE WORLD.
CANADA HAS EIGHT MARINE PROTECTED AREAS AND EIGHT AREAS OF INTEREST.
CANADA HAS MORE LAKES THAN THE REST OF THE WORLD COMBINED. APPROXIMATELY 2 MILLION!
CANADA HAS FIVE OCEAN WATERSHEDS.
PERSONAL WATER USE:
10%
25%
30%
35%
FOR DRINKING
FOR CLEANING
FOR FLUSHING
FOR BATHING
Canadian Geographic


FINDING
PLASTIC
40%
Gyres make up 40% of the seas total area.
They're created when litter is whirled together by a vortex of currents.
400 Years
450 Years
50 Years
20 Years
Plastic never really goes away it just breaks down into smaller and smaller pieces — so small the naked eye can't see it. Microplastics are tiny plastic particles up to 5 millimetres in diameter.
We would need 1,000 boats to travel the world's oceans, filtering the water for 24 hours a day for 79 years to clean the gyres.
Today
450 Years
x3
12 million metric tons of plastic pieces float into our oceans every year. That is approximately three times the weight of every man, woman and child in Canada!
Over 260 species, including invertebrates, turtles, fish, seabirds and marine mammals, have been reported in ingest or became entangled in plastic debris, resulting in impared movement and feeding, reduced reproductive output, lacerations, ulcers and death.
CANADIAN WILDLIFE FEDERATION
What is your plastic footprint?
Find out at RiversToOceans.ca

- How do numbers, data and mathematical information help to create a compelling case for others to engage with and understand a global issue?


736 million
25 children under
at risk of
1 in 10 people in the world
Tanish



BC Curriculum Connections

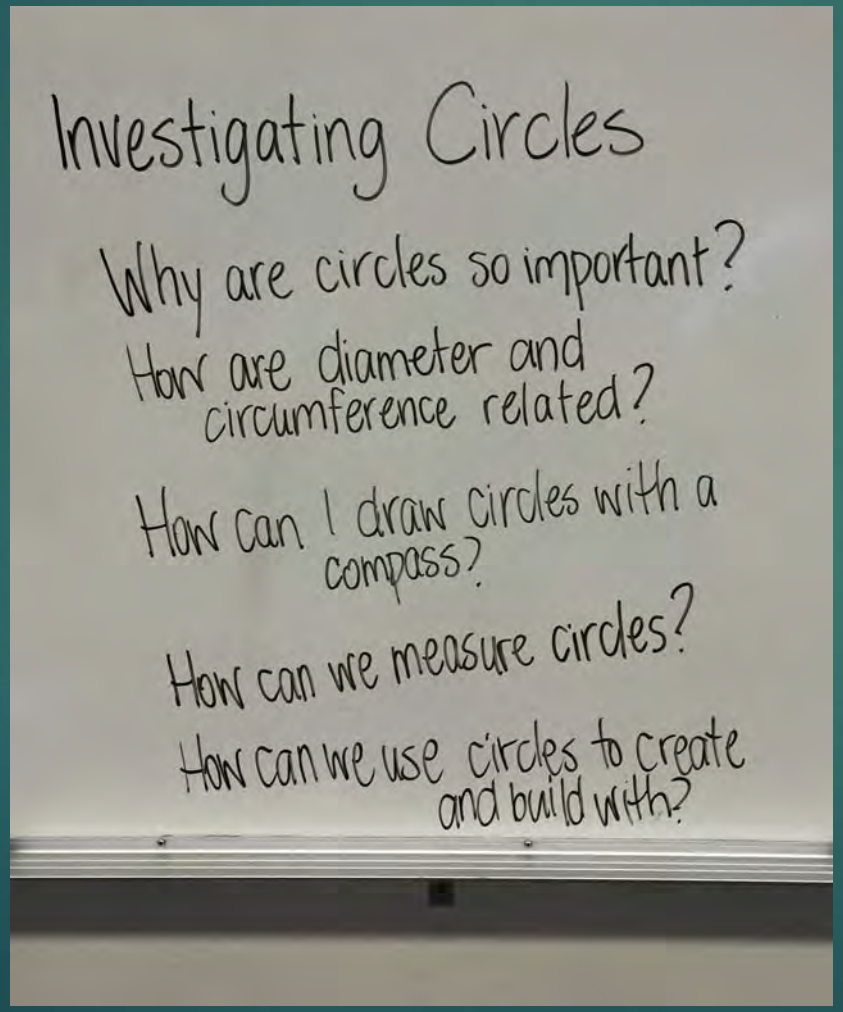
- **Major tenets:** inquiry-based approaches to teaching and learning, literacy, numeracy, digital literacy, visual literacy, core and curricular competencies

- **Mathematics, English Language Arts, Social Studies and Science Curriculum Frameworks**
  - Big Ideas
  - Curricular Competencies
  - Curricular Content

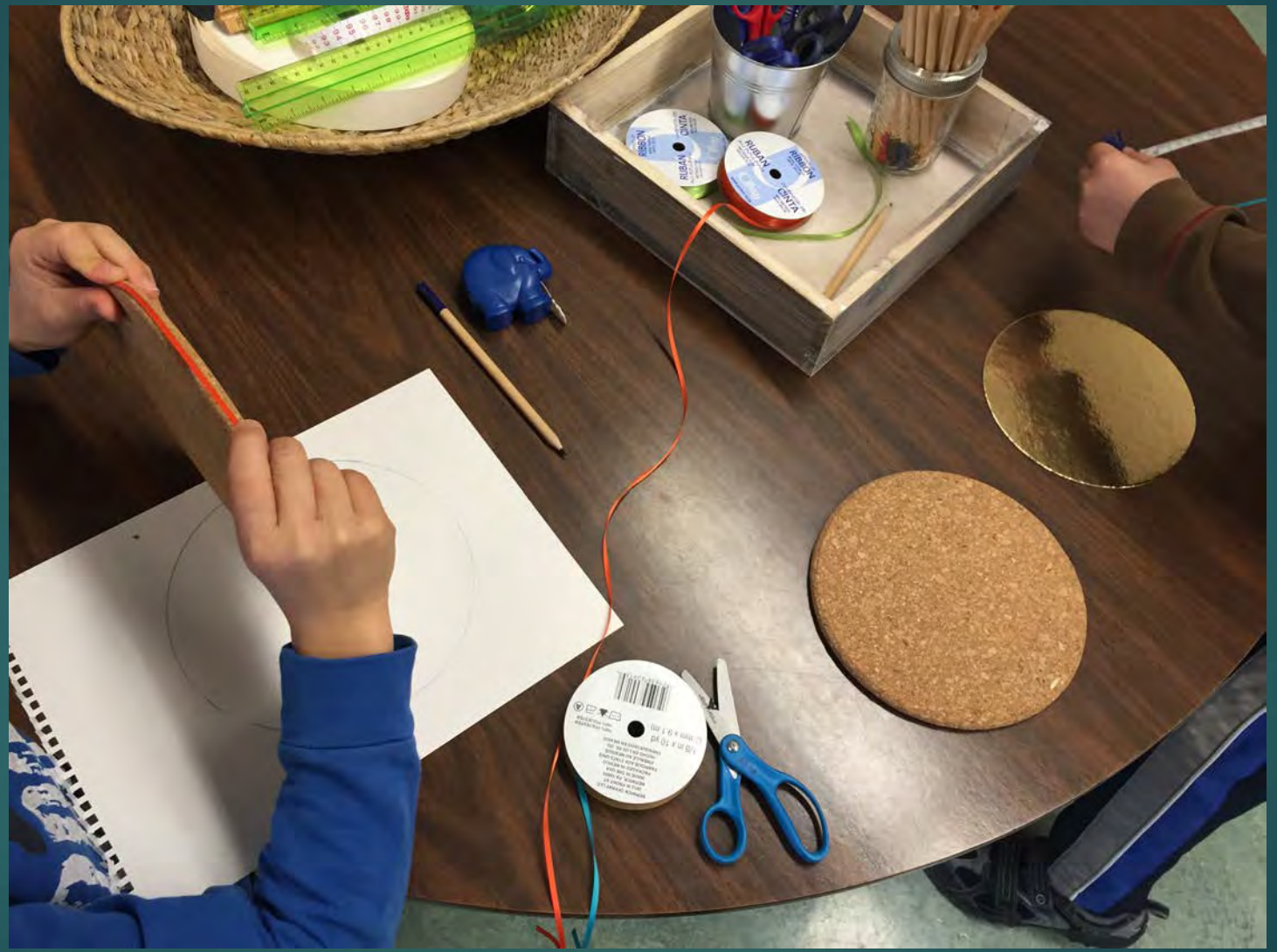
What connections are you making?

Spindle Whorls

Investigating Circles: Communicating our Thinking



Grades 3&4
Grauer Elementary


RIBBON
CINTA
RUBAN

Where to next?

BC Mathematics Curricular Competencies

Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving

Engage in problem-solving experiences that are connected to place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures

Incorporate First Peoples worldviews and perspectives to make connections to mathematical concepts

Thinking about the circle:
Where does math live in Susan Point's spindle whorl art?

considerations

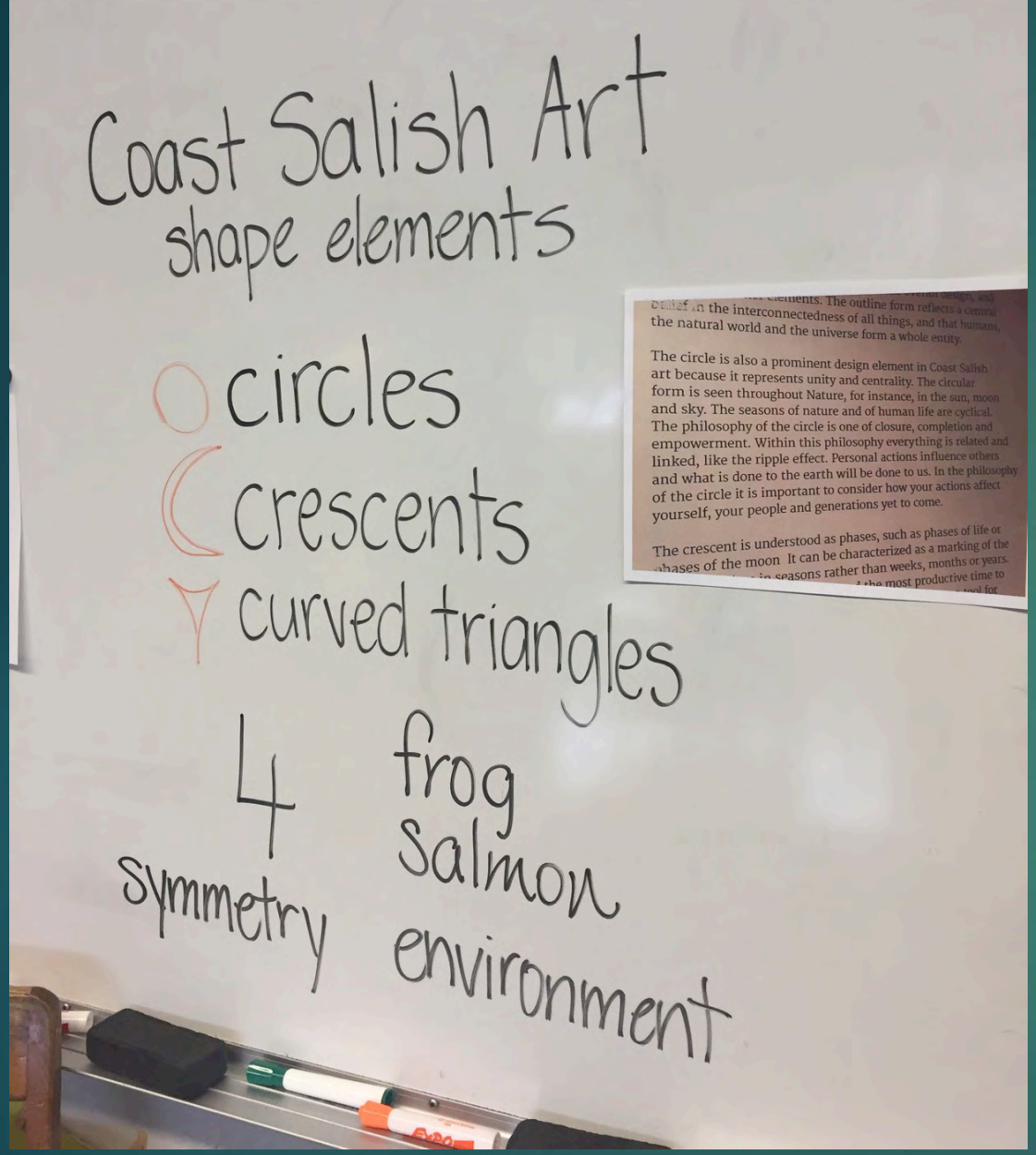
- *Students' interests, background knowledge, potential for engagement*
- *Curriculum connections*
- *Authentic resources*
- *Art, belongings– public vs private, sacred, ceremonial*
- *Mathematizing - tension*
- *Mathematical connections – math to math, math to self, math to world*

Investigating the Art of Susan Point

- **Grades 3&4**
- Develop, demonstrate and apply mathematical understanding through play, inquiry and problem-solving
- Engage in problem-solving experiences that are connected to place, story, cultural practices, and perspectives that are relevant to local First Peoples communities, the local community and other cultures
- **Grade 4**
  - line symmetry

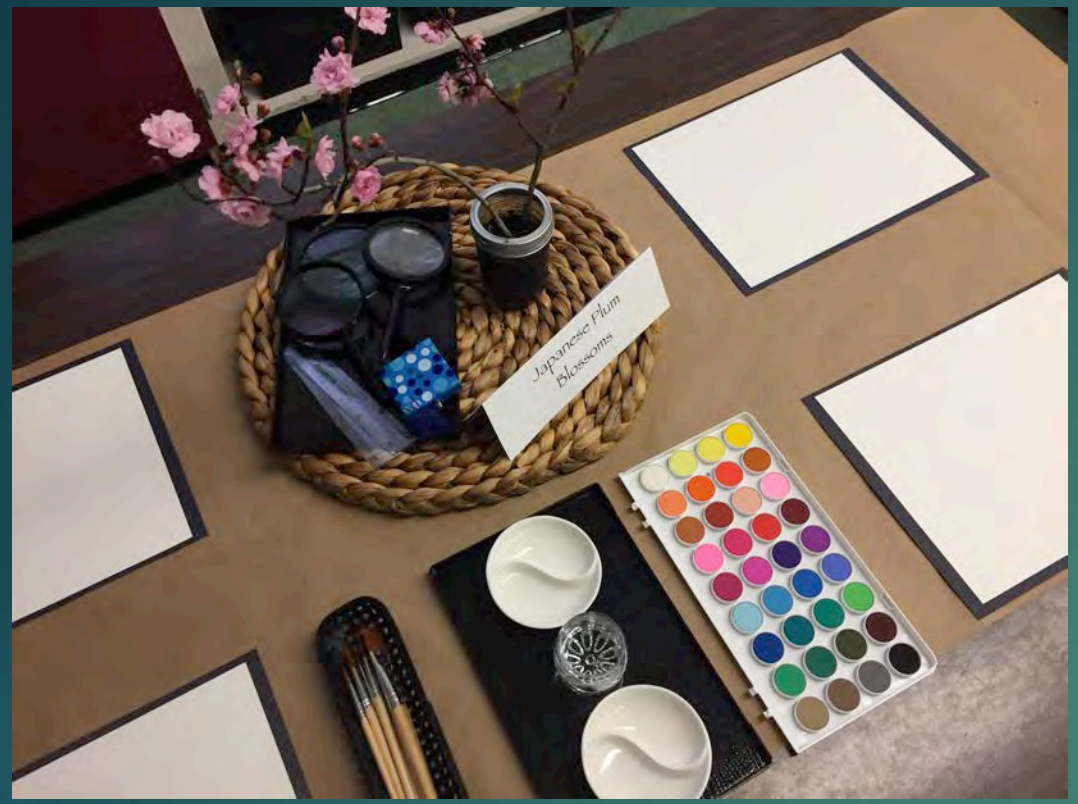
Can you identify line symmetry in Susan Point's art?

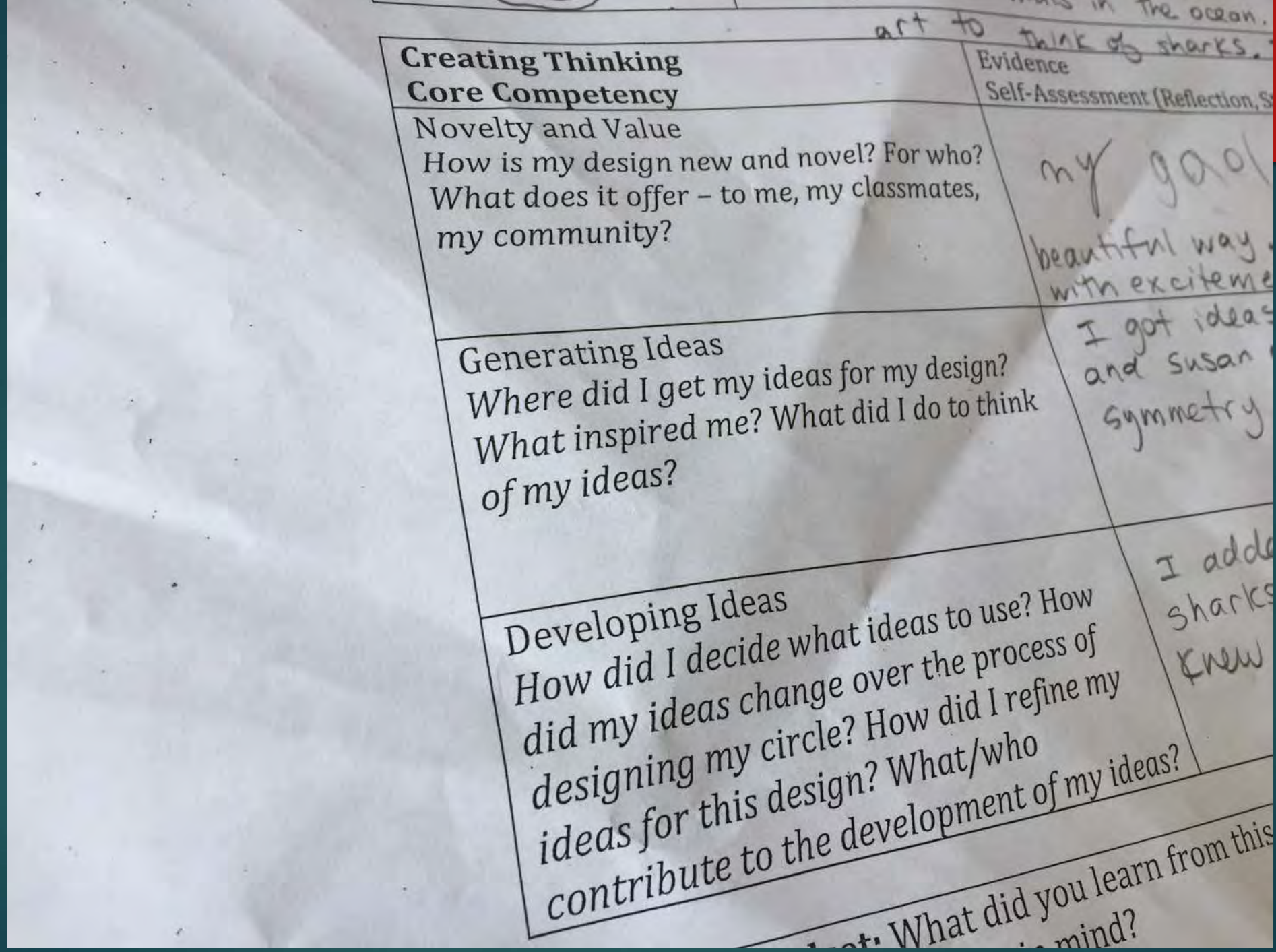
Can you create a design inspired by Susan Point that has line symmetry?


Coast Salish Art
shape elements
circles
crescents
curved triangles
4
symmetry
frog
salmon
environment
the interconnectedness of all things, and that humans, the natural world and the universe form a whole entity.
The circle is also a prominent design element in Coast Salish art because it represents unity and centrality. The circular form is seen throughout Nature, for instance, in the sun, moon and sky. The seasons of nature and of human life are cyclical. The philosophy of the circle is one of closure, completion and empowerment. Within this philosophy everything is related and linked, like the ripple effect. Personal actions influence others and what is done to the earth will be done to us. In the philosophy of the circle it is important to consider how your actions affect yourself, your people and generations yet to come.
The crescent is understood as phases, such as phases of life or phases of the moon It can be characterized as a marking of the seasons rather than weeks, months or years.


SUSAN POINT SPINDLE WHORL
SUSAN POINT
The Spindle Whorl
susan POINT
coast salish artist


Hannah & the Spindle Whorl
SUSAN POINT WORKS ON PAPER
A SENSE OF PLACE
The Spindle Whorl
susan POINT
coast salish artist
10


Japanese Plum
Blossoms



Creating Thinking Core Competency	Evidence Self-Assessment (Reflection, S
Novelty and Value How is my design new and novel? For who? What does it offer – to me, my classmates, my community?	my goal beautiful way with excitem
Generating Ideas Where did I get my ideas for my design? What inspired me? What did I do to think of my ideas?	I got idea and susan symmetry
Developing Ideas How did I decide what ideas to use? How did my ideas change over the process of designing my circle? How did I refine my ideas for this design? What/who contribute to the development of my ideas?	I add sharks knew

art to think of sharks.

What did you learn from this

mind?

BC Curriculum Connections

- **Major tenets:** core competencies, design process, First Peoples Principles of Learning, personalized learning, competency-based

- **Mathematics, Visual Arts, ADST, Social Studies and Science Curriculum Frameworks**
  - Big Ideas
  - Curricular Competencies
  - Curricular Content

What opportunities will you find to connect the dots for yourself and your students?

THANK YOU!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