



“Making Space” for Culturally Responsive Inquiry

OLA Super Conference 2020

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1. Examine ways of making **explicit connections** to the **curriculum** including: *the creative and critical analysis process in The Arts* and *the technological building process in Science and Technology*
2. Develop a common understanding of **culturally responsive pedagogy**
3. Design a rich **Maker experience** that connects content and skill
4. Explore ways of making **explicit literacy connections** to the Maker Process

What are the implications for creating **culturally responsive** literacy spaces for our **modern learners**?

How can using **culturally responsive pedagogy** help students of all identities become more **critically empowered** and **critically literate citizens**?

Diversity

The presence of a range of human qualities and attributes that include . . .

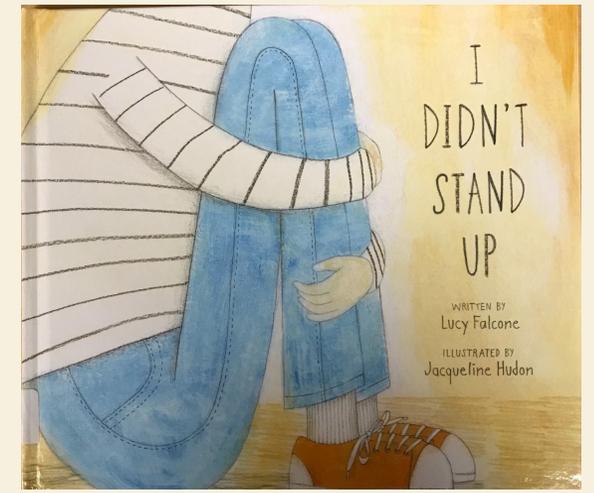


- ✓ **Citizenship**
- ✓ **Class**
- ✓ **Disability**
- ✓ **Ethnic origin**
- ✓ **Gender Identity**
- ✓ **Language**
- ✓ **Marital status**
- ✓ **Race**
- ✓ **Religion**
- ✓ **Sex**
- ✓ **Sexual orientation**

Examining Our Social Location

- ⇒ Who am I?
- ⇒ How do my experiences and the way I see the world impact my classroom practices?
- ⇒ What are my expectations for students?
- ⇒ What do I know about my students, their identities, and experiences?
- ⇒ How does my pedagogy support student achievement and well-being?
- ⇒ How do I learn about my students' cultural, racial, ethnic identities, perspectives and experiences?

As you listen to the read aloud of the picture book – *I Didn't Stand Up* by Lucy Falcone.



Refer to the questions provided to reflect on your own **social location**.

Make note of the parts of the text that sparks a connection or supports your thinking.

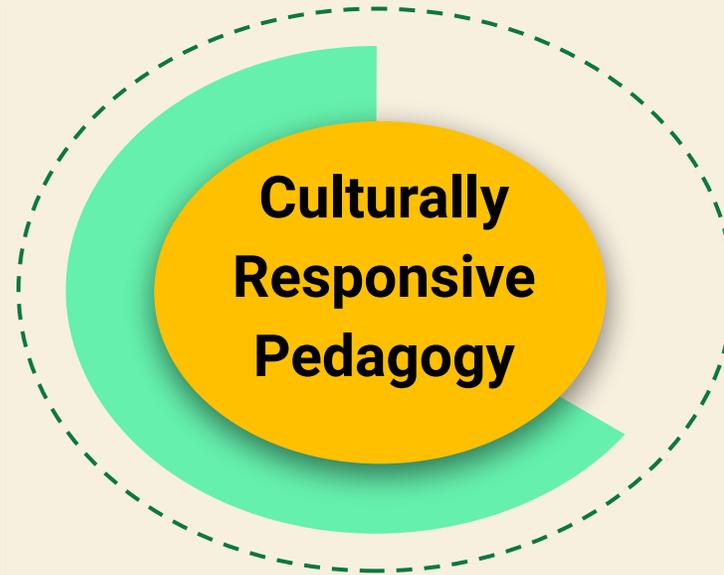
Share your thoughts with an elbow partner.

Cultural Competence

- Use students' cultures as vehicles for learning
- Connect to knowledge of families and communities
- Students' social identities and lived experiences are valued and respected

Academic Success

- High Expectations
- High-yield teaching strategies
- Equitable assessment



Critical Consciousness

- Students develop a broader socio-political consciousness
- Students critique the norms, values, mores, and institutions that produce and maintain inequities

What are the implications for creating **culturally responsive** literacy spaces for our **modern learners**?

Goals:

- Increase student engagement
- Provide student choice and honour student voice
- Broaden students' perspectives
- Centre students' identities, experiences and their voices
- Use students' cultural capital to foster global citizenship

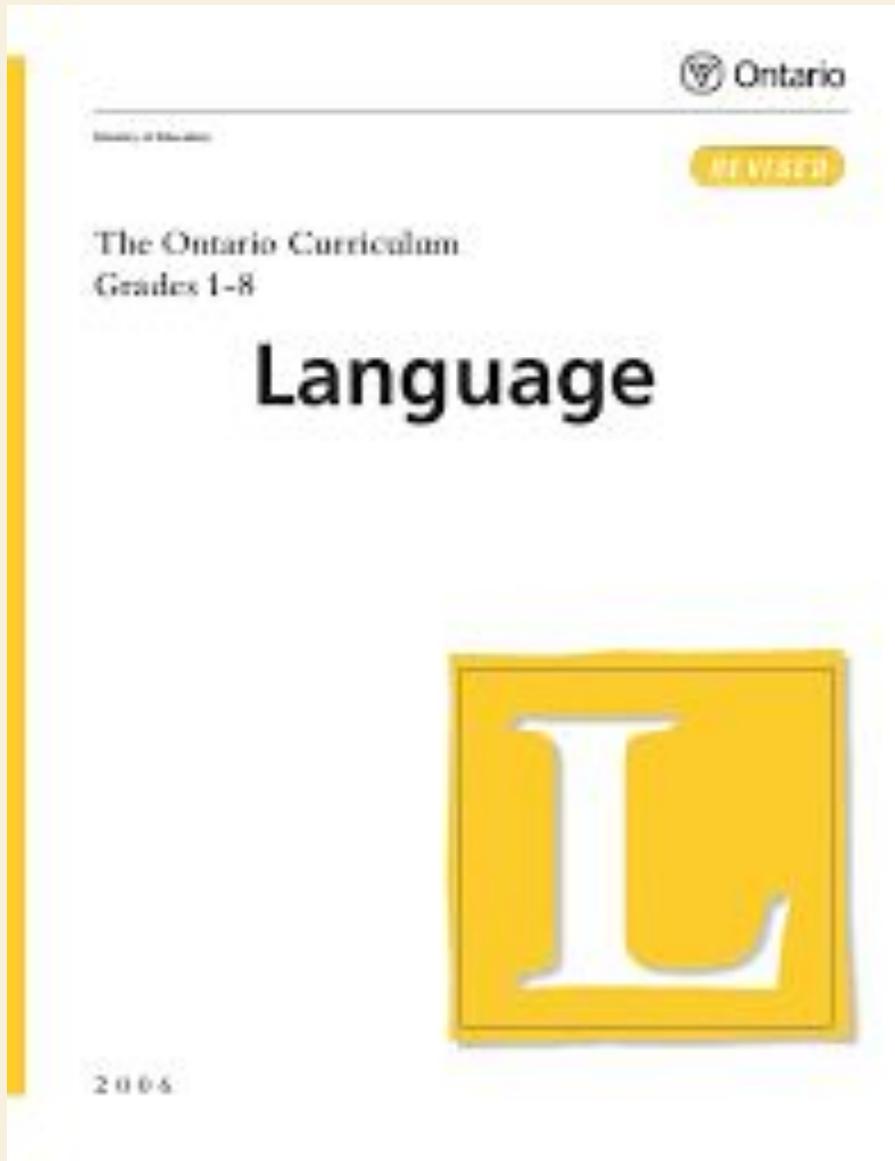
If enacting **culturally responsive pedagogy** and understanding modern learners are at the instructional core to ensuring that “all students are engaged, included, and respected, then **how do we make a difference as educators?**



Culturally Responsive Maker Journey

How do we use the *Maker* philosophy to provide *meaningful learning experiences* for our learning community that are **grounded in literacy** and **connected to the curriculum?**

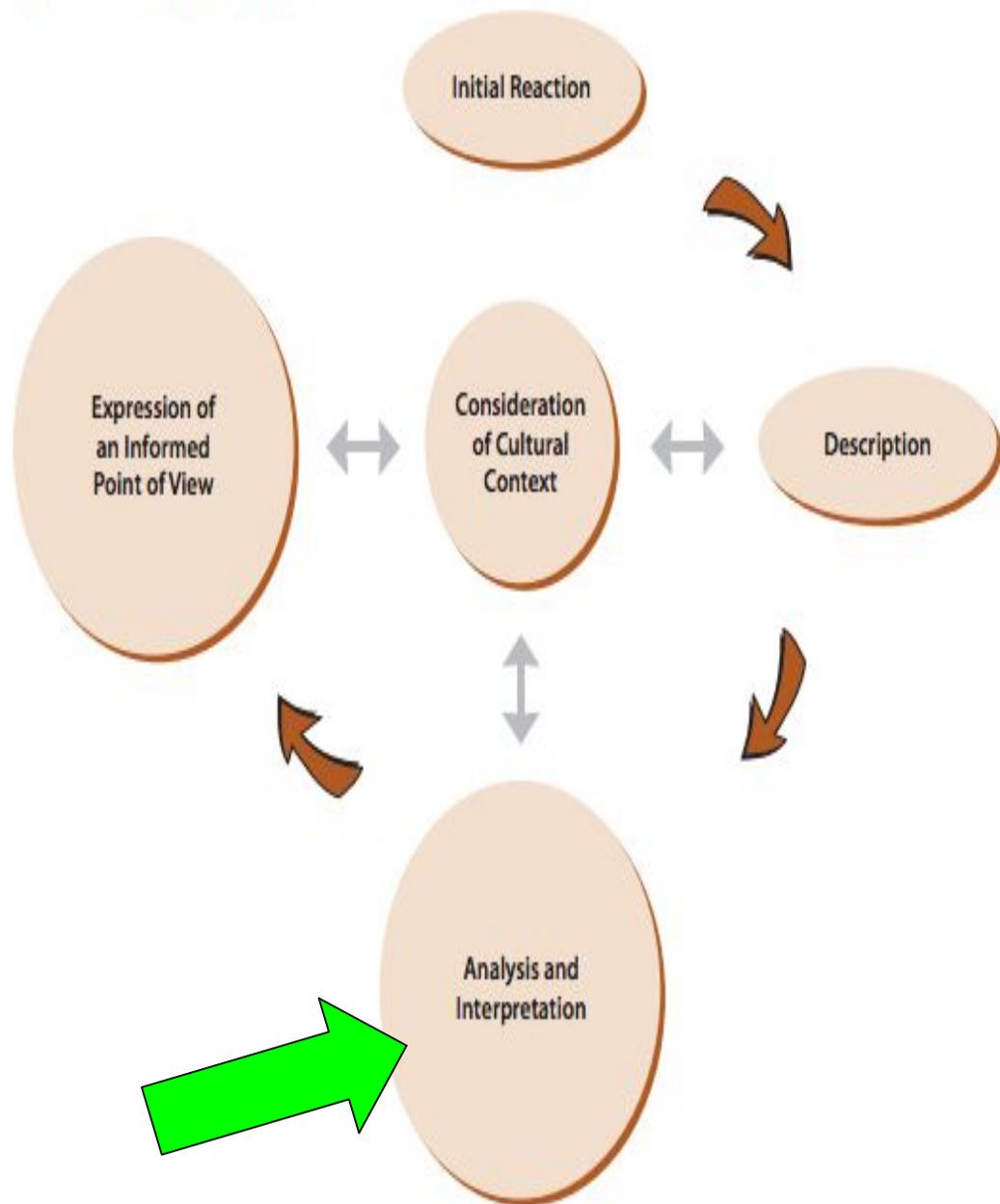
How do we ensure that the curriculum values **ALL student identities** and their **cultural competencies?**



Essential Literacy Skills

- demonstrate understanding (retelling, summarizing)
- make inferences/ interpreting
- extend understanding (connecting, comparing and contrasting)
- analyzing
- evaluating
- identify point of view and alternate perspectives
- synthesizing
- metacognition

The Critical Analysis Process



Throughout Grade 5, students will:

PROBLEM SOLVING

- develop, select, and apply problem-solving strategies as they pose and solve problems and conduct investigations, to help deepen their mathematical understanding;

REASONING AND PROVING

- develop and apply reasoning skills (e.g., classification, recognition of relationships, use of counter-examples) to make and investigate conjectures and construct and defend arguments;

REFLECTING

- demonstrate that they are reflecting on and monitoring their thinking to help clarify their understanding as they complete an investigation or solve a problem (e.g., by comparing and adjusting strategies used, by explaining why they think their results are reasonable, by recording their thinking in a math journal);

SELECTING TOOLS AND COMPUTATIONAL STRATEGIES

- select and use a variety of concrete, visual, and electronic learning tools and appropriate computational strategies to investigate mathematical ideas and to solve problems;

CONNECTING

- make connections among mathematical concepts and procedures, and relate mathematical ideas to situations or phenomena drawn from other contexts (e.g., other curriculum areas, daily life, sports);

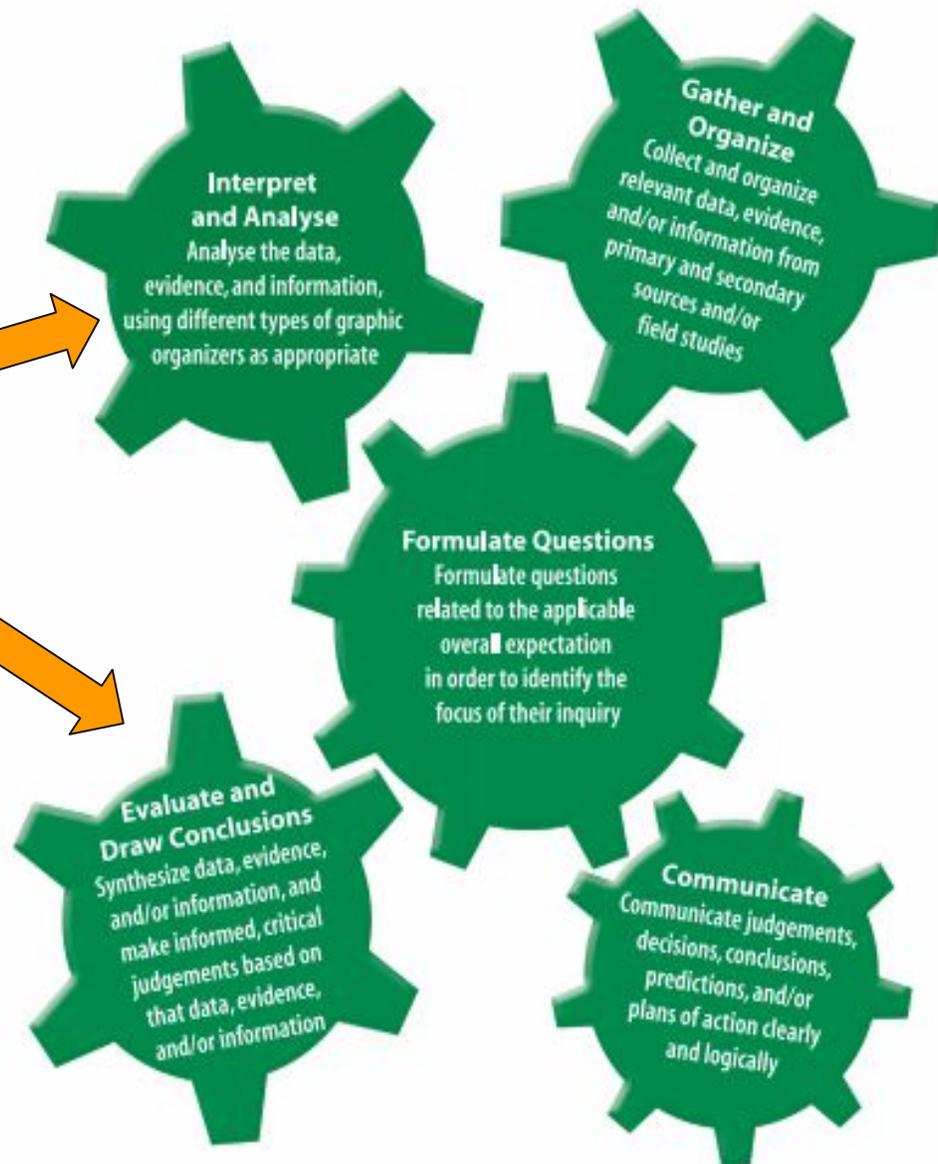
REPRESENTING

- create a variety of representations of mathematical ideas (e.g., by using physical models, pictures, numbers, variables, diagrams, graphs, onscreen dynamic representations), make connections among them, and apply them to solve problems;

COMMUNICATING

- communicate mathematical thinking orally, visually, and in writing, using everyday language, a basic mathematical vocabulary, and a variety of representations, and observing basic mathematical conventions.

The Inquiry Process



CONTINUUM FOR SCIENTIFIC INQUIRY/EXPERIMENTATION SKILLS

Analysing and Interpreting



The student:

discusses data, and asks new questions based on data	identifies patterns in the data, and summarizes the data	identifies patterns and discrepancies in the data, and summarizes the data	identifies patterns in the data, suggests explanations for discrepancies, and summarizes the data
proposes an answer to the question being investigated, on the basis of observations	draws a simple conclusion on the basis of observations	draws simple conclusions on the basis of data gathered	draws conclusions on the basis of data gathered
describes what was done and what was observed	makes a simple evaluation of the experiment	evaluates the experimental procedure, explains changes that could be made to improve it, and gives reasons for the changes	evaluates the experimental procedure, explains changes that could be made to improve it, and gives reasons for the changes

Connecting the Curriculum to the Maker Mindset

iCREATE

I can...

- make a plan
- identify the purpose and target audience
- include different conventions and techniques
- use a variety of media forms
- reflect on my learning

iDESIGN

I can...

- identify a problem
- make a plan
- gather and use materials
- follow my plan
- design/create/build a model
- test and prove my model
- modify my model as needed
- explain how and why my models helps solve the problem
- reflect on my learning

iCODE

I can...

- make a plan
- set and describe a path
- create a sequence of commands
- show direction and movement
- use the specific "coding" language
- reflect on my learning

Connecting the Curriculum to the *Maker Mindset*

iPRODUCE

I can...

- use my imagination to make a plan
- explore using different materials, tools and techniques
- produce work for an audience
- revise my ideas
- reflect on my learning

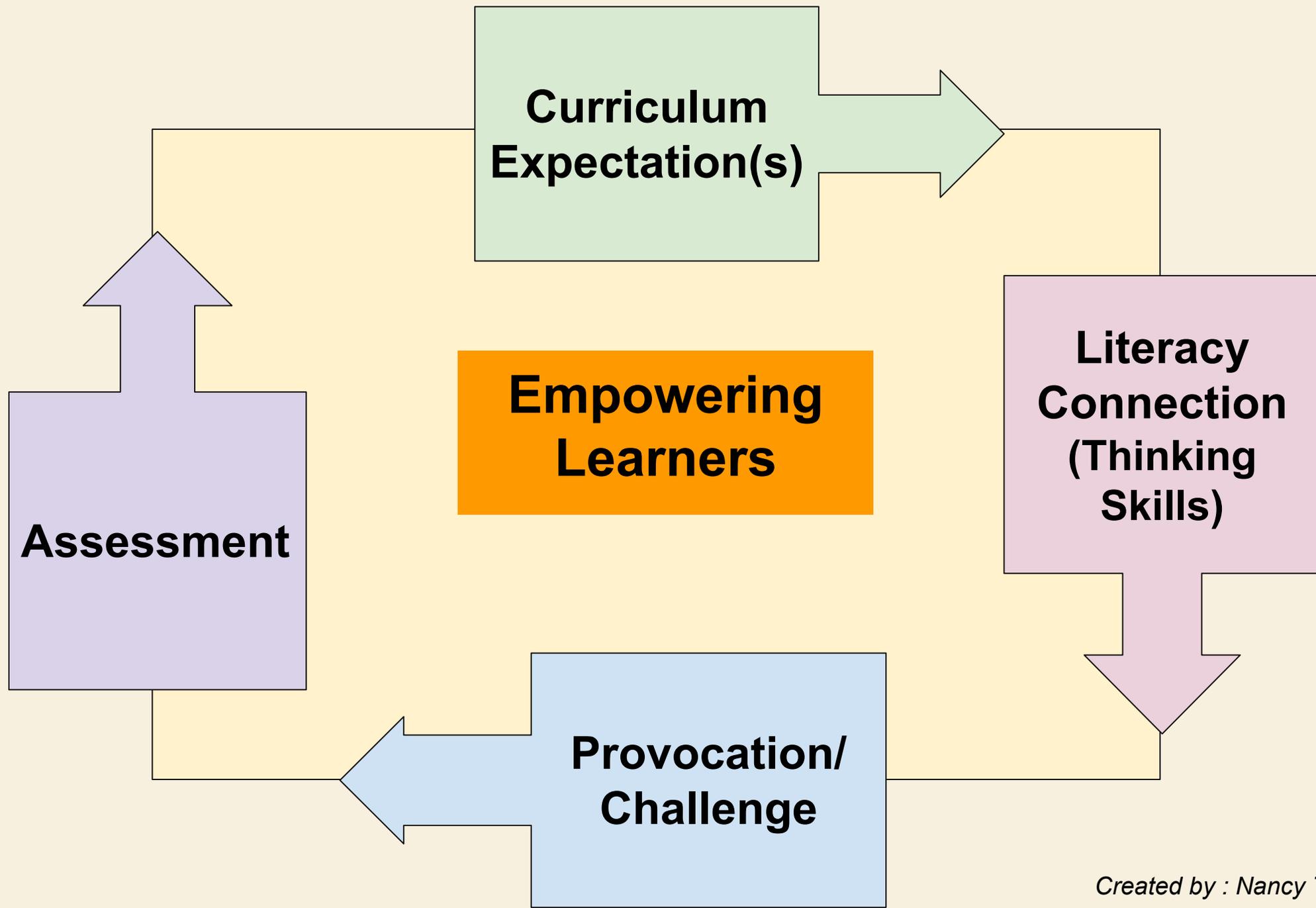
CONVENTIONS and TECHNIQUES

- pictures
 - photographs
 - graphics
-

- colour
 - music
 - sound effects
-

- animation
 - moving images
 - camera close-ups
-

- camera angles
- layout
- captions
- font sizes



Maker Experience

- Select **curricular expectations**
- Create a rich **provocation** that connects to the curriculum
- Determine the **literacy skills** that you want to emphasize through the provocation
- Think about the **Maker tools** you want the students to use (high tech, low tech, no tech)



Students assign Maker Roles within Group

Challenge Captain

- Make decisions for the team.
- Provide encouragement and support to team members.
- Make sure other team members are doing their jobs correctly.
- Help other team members do their jobs if needed.
- Record information on the Design Cycle Plan for the team.

Chief Architect

- Coordinate building for the team.
- Decide which ideas to use during the challenge.
- Suggest when a test may be needed in the challenge.
- Make sure team is building safely at all times.
- Request additional building help if needed.

Testing Coordinator

- Coordinate tests needed to check success for the team.
- Decide when tests of ideas are needed during the challenge.
- Determine when team is successful (based on test results) in the challenge.
- Make sure team is testing for success in the challenge correctly.
- Request additional time if needed.

Materials Master

- Gather/purchase materials for the team.
- Organize materials for the team as needed.
- Understand and communicate the correct use for each of the materials for the challenge.
- Make sure other team members are using the materials correctly.
- Request additional materials if needed.

Rapid Reporter

- Share the ideas used by team in order to complete the challenge with the whole class.
- Explain the solution the team used to solve the challenge.
- Explain challenges faced by the team during the challenge.
- Answer any questions from classmates about the challenge.

The Power of a Provocation

@trev_mackenzie

@rbathursthunt

Illuminate Questions

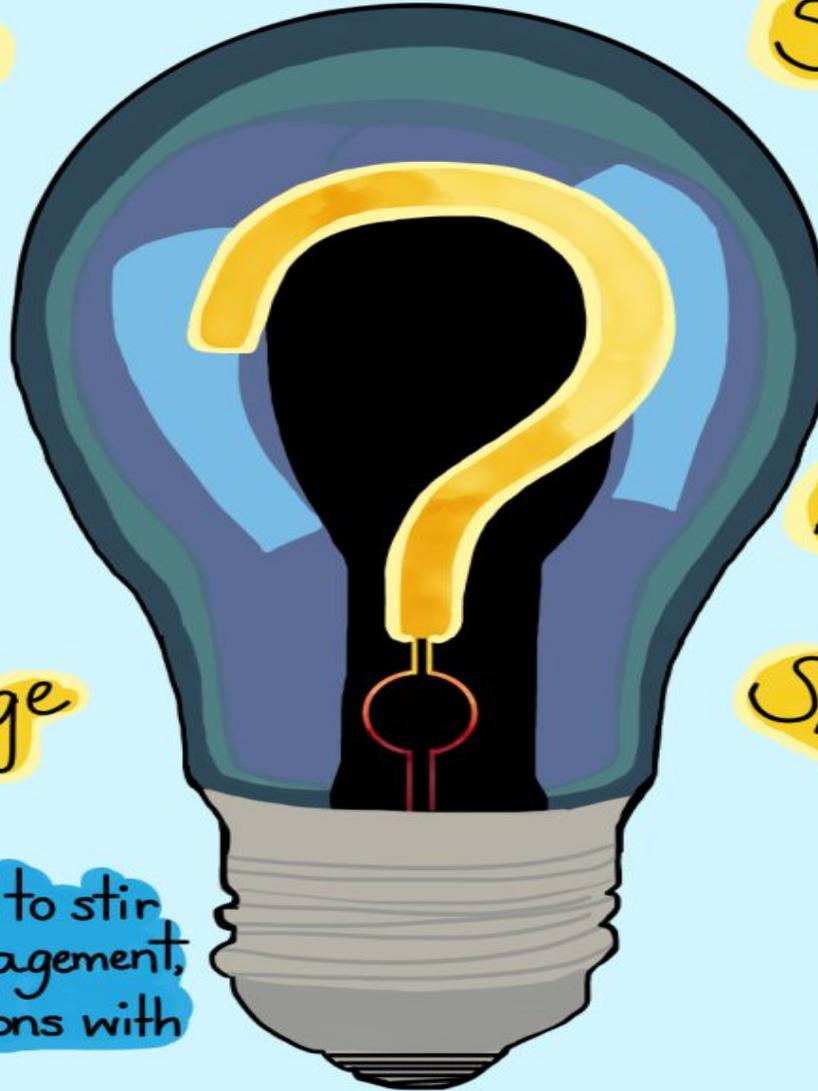
Radiate Passions

Intensify Investigations

Highlight Dreams

Heat up Prior Knowledge

"Provocations: to stir thought, wonder, engagement, curiosity and questions with our learners."



Spark Curiosities

Ignite Inquiries

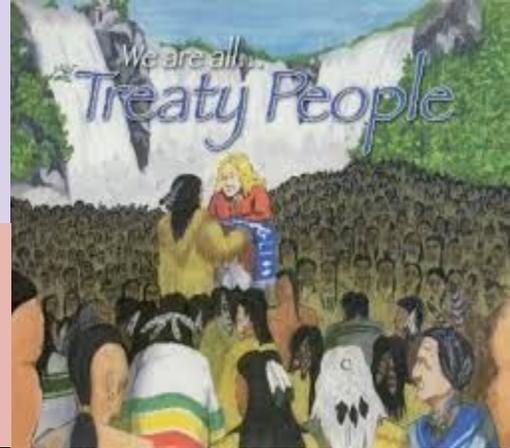
Enliven Engagement

Brighten Interests

Switch on Wonders

#InquiryMindset

COMMUNITIES IN CANADA, PAST AND PRESENT: Grade 6 - Treaty Territories



What are the traditional Indigenous and treaty territories on which Canadian communities are located?

Resources:

Treaties in Canada Education Guide: http://education.historicacanada.ca/files/31/Treaties_English.pdf

Treaties Ontario: <https://www.ontario.ca/page/treaties>

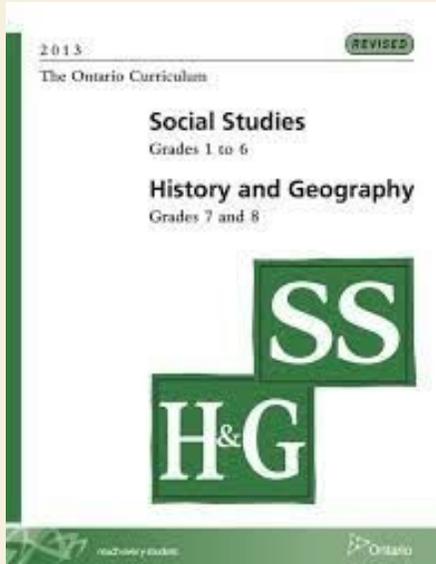
Provocation:

Investigate treaty maps of Canada and identify the Canadian communities and its **treaty territory**.

Create a **timeline** of the treaties and map it out using green tape on the map of Canada.

Code the Spheros to follow along as you **describe** the treaty map and timeline.

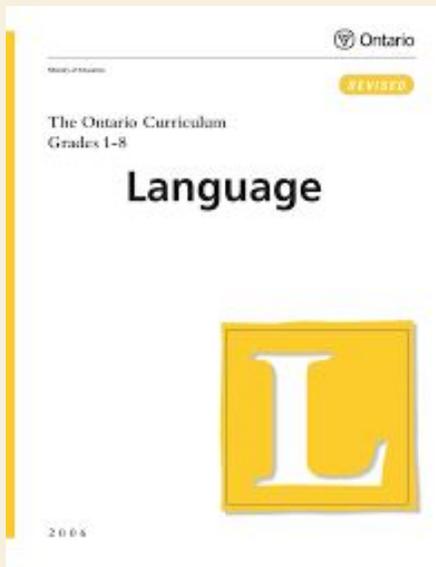
Curriculum Area



COMMUNITIES IN CANADA, PAST AND PRESENT: Grade 6 - Treaty Territories

Guiding Question

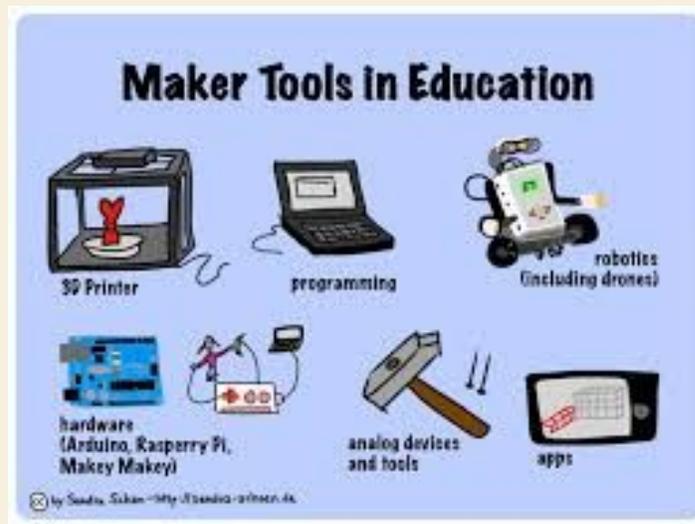
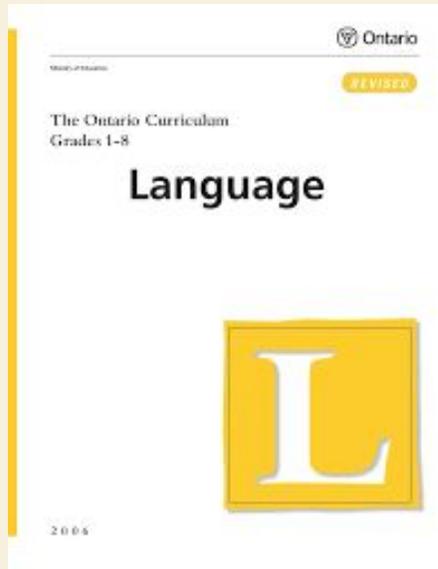
Identify the traditional Indigenous and treaty territories on which Canadian communities are located? How did they impact present day Canada?

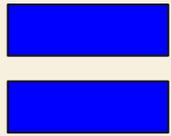
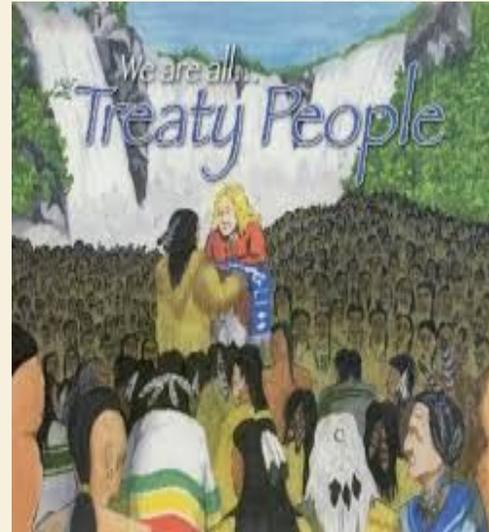
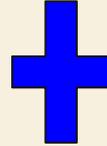
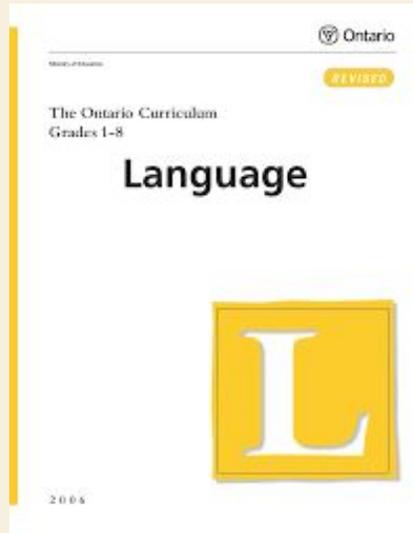
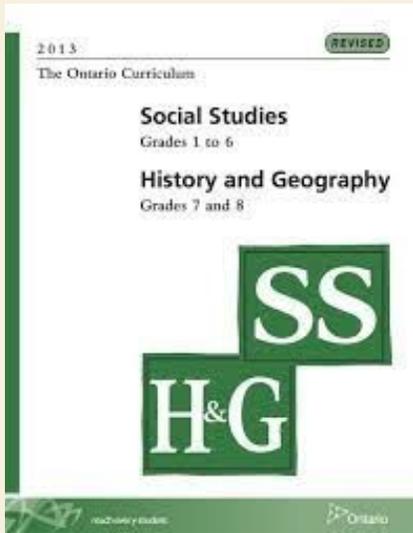


Literacy Skills

What are the literacy skills that you want to emphasize through the provocation?

Culturally Responsive Resources





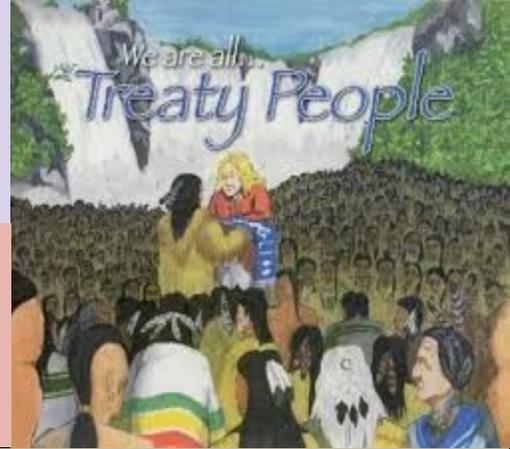
Provocation/ Challenge

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Black Artists Who Inspire Artistic Creativity



Faith Ringgold



Alma Thomas



Jacob Lawrence



Elizabeth Catlett



Aaron Douglas

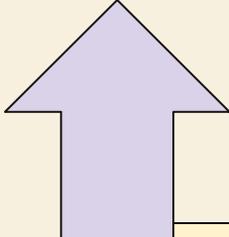
Provocation: Jacob Lawrence

Focus on Jacob Lawrence's stories and his process rather than his style.

What is an important moment from your personal or family history? How can you visually represent it?

Like Lawrence, you can choose a *colour story* or a palette to work with that captures the feeling and memory of that moment.

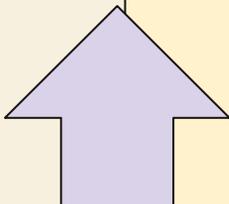
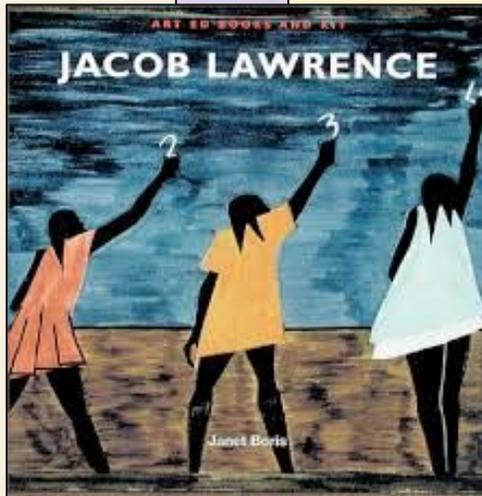




The Arts

Empowering Learners

Making connections and determining importance



What is an important moment from your personal or family history? How can you visually represent it?

Exploring Provocations

Explore the various **provocations** around the room...

- 1. How does each provocation support a curriculum area?**
- 2. What literacy connections do you see?**
- 3. How do the culturally responsive resources centre students' identities and broaden their perspectives?**

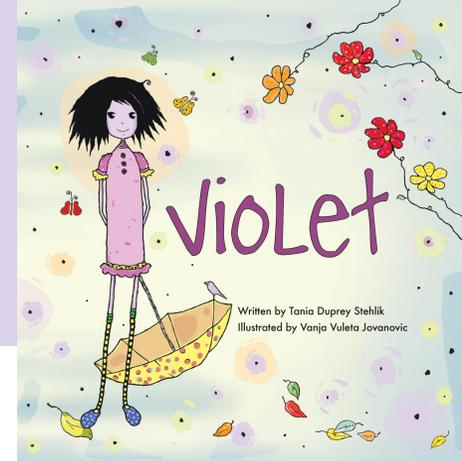
Consolidating our Learning

As you explored the provocations...

1. What did you notice?
2. What did you think about?
3. What are you wondering?

Violet

by Tania Duprey Stehlik

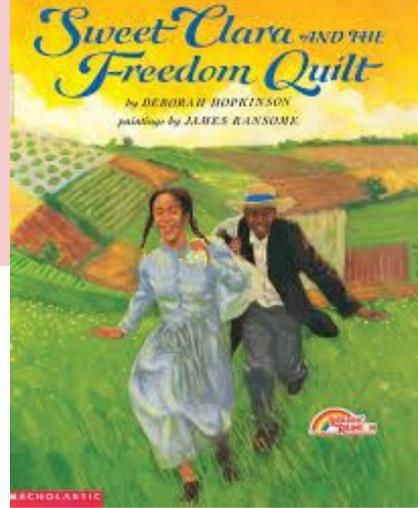


- Make a character using only one colour of **Lego**.
- Select a movie making app.
- Create a video clip demonstrating what **emotions** the character feels based on the colour **Lego** you selected.
- Describe an emotion that you have felt in your own life. Why did you feel that way?



Sweet Clara and the Freedom Quilt

by Deborah Hopkinson



Sweet Clara is a young slave that stitches a quilt with a map pattern which guides her to freedom in the North.

Provocation:

- Use the Bloxel board to **recreate** the **map pattern quilt** that Sweet Clara created in the book.
- Use the bloxels to **create** Sweet Clara's **character** and the **setting** in the story.
- Take turns playing the video game reenactment.

Reflect:

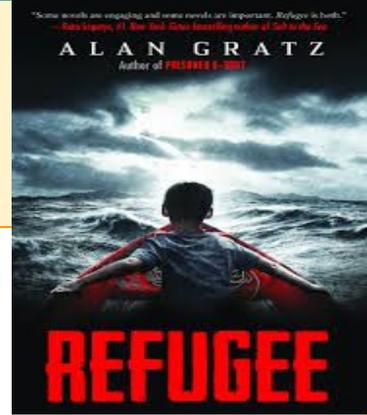
What **challenges** did you face while recreating the map pattern quilt?

What helped you work through the challenges?

What else can a quilt pattern be used for?



REFUGEE: Travel Brochure



Maps:

Central America and Caribbean Map:

<http://www.ducksters.com/geography/centralamerica.php>

European Map:

<http://www.ducksters.com/geography/europe.php>

Middle East Map:

<http://www.ducksters.com/geography/middleeast.php>

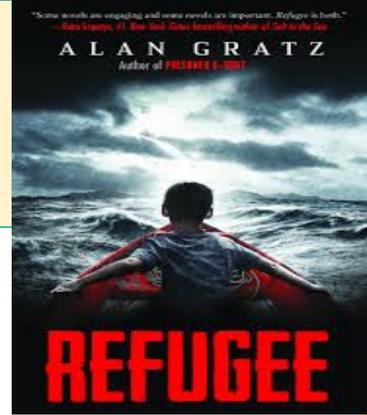
North America Map:

<http://www.ducksters.com/geography/northamerica.php>

- **Estimate** the distances traveled by Josef, Isabel, and Mahmoud.
- **Calculate** how long and how much these journeys would have taken today using the fastest and easiest traveling methods available.
 - How do they **compare** to how the characters in the book were able to travel?

Provocation: Create a print or computer-designed travel brochure using **Canva** for one of the places described in the book. Be sure to **persuade** someone to visit this place.

REFUGEE: Design Challenge



- **Create** a miniature raft using recycled materials.
- **Test** raft to see how long it can float in water.
- **Create** a commercial advertising your raft.

Include the following in your video:

- ❑ **Explain** how you made the raft.
- ❑ Why did you **choose** certain materials?
- ❑ How long can it **float**? Why?
- ❑ What **changes** did you make?
- ❑ What did you **learn** in the process?



COMMUNITIES IN CANADA, PAST AND PRESENT: Grade 6 - Key Differences

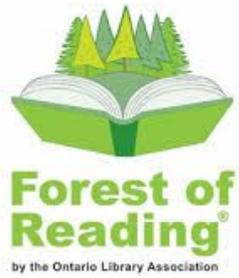
What are some key differences between a historical and a contemporary community?

Provocation:

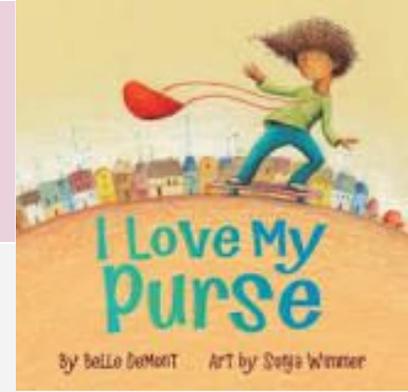
Create a movie trailer using iMovie highlighting **key differences** between a historical and a contemporary community. **How do you think these differences have contributed to Canadian identity?**

Include at least one First Nations, Métis, or Inuit community, in Canada.





I Love My Purse



Provocation:

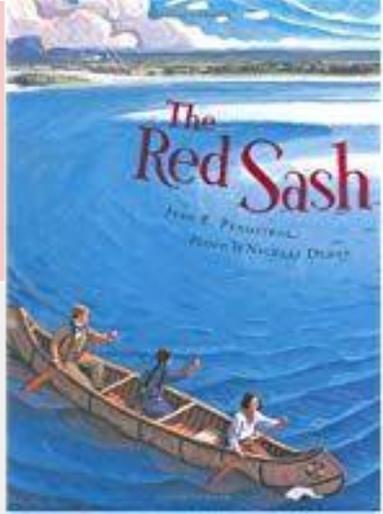
- Make a **list** of 6 ways that you are **different** on the outside from others.
- **Write** a **story** or **poem** about your **differences**.

Be **creative** and think of ways that your differences are helpful and contribute to your family and community.

Record yourself citing your story or poem using the **Flipgrid** app.

The Red Sash

by Jean E. Pendziwol



Provocation:

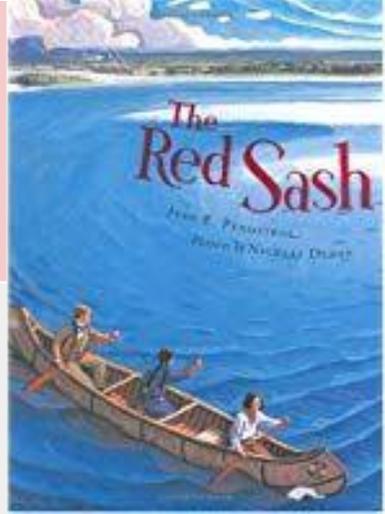
How does the Metis boy act as a good citizen in his community?

Use the **Ozobot** to sequence his journey.



The Red Sash

by Jean E. Pendziwol



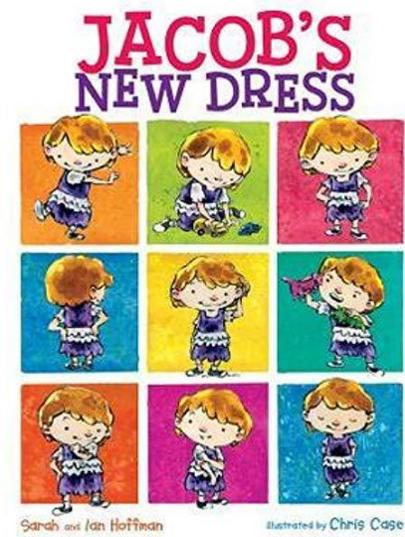
Provocation:

The Metis boy received a gift in the story.

Using the materials provided (loose parts, LEGO, recycled), **create** a gift that you would give someone in the year 2020 for helping someone or a group of people that are struggling.

Jacob's New Dress

by Sarah and Ian Hoffman



Provocation:

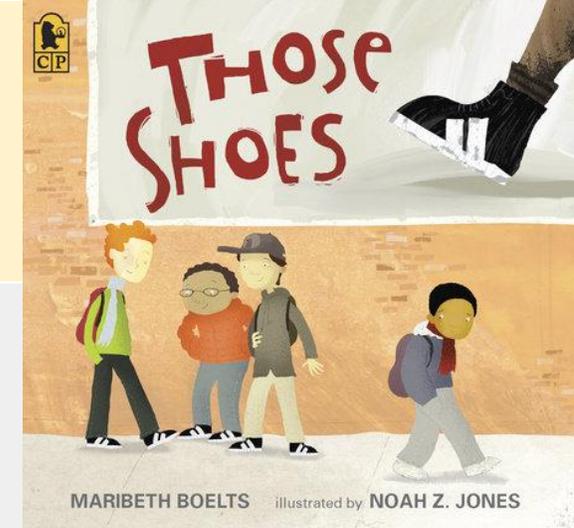
What would you say or do to help Jacob feel included?

What do you think it means to be “inclusive”?

Use the fabrics provided to create a dress that represents inclusion.

Those Shoes

by Maribeth Boelts



Provocation:

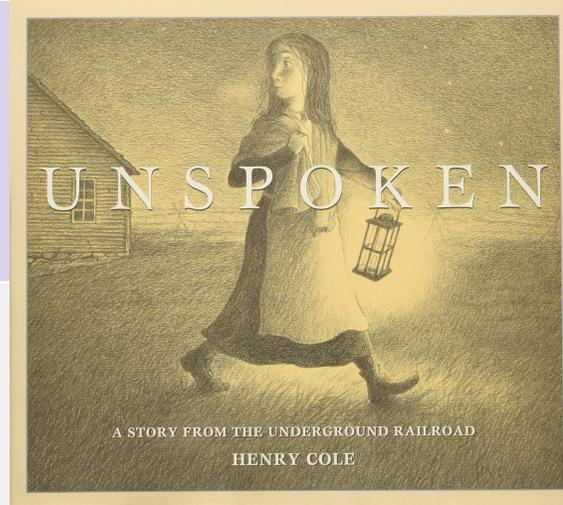
Create a list of Jeremy's "needs" and "wants".

Explore ways in which we can be everyday heroes by helping those in need.

Based on what you believe are the qualities of a true friend, create a Superhero that displays these qualities using the Scratch/ Scratch Jr. programs.

Unspoken

by Henry Cole



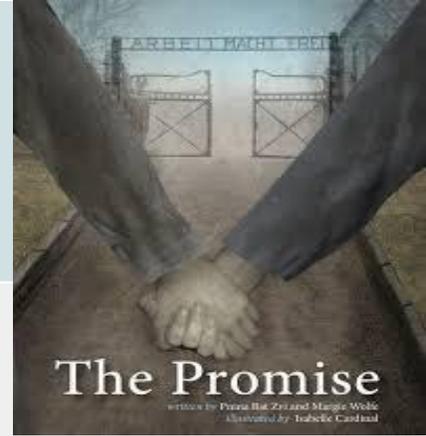
Provocation:

Create a blog in the perspective of one of the characters from the story and record it using the Podcast studio. This will be shared on the school TVs. Think about how this could be a weekly podcast.

Explain why they were doing what they were doing and the emotions they were feeling.

The Promise

by Pnina Bat Zvi and Margie Wolfe



Provocation:

In your **opinion**, who is the most important character in the story?

Design a *survival guide* for your character. Think of the materials - ***low tech or high tech*** - that you could use to **create** this survival guide.

Piggybook

by Anthony Browne

PIGGYBOOK



Anthony Browne

Provocation 1: Video FUN:

Make a list of household jobs.

How can household jobs be shared among family members?

- **Create** an **advertisement** that convinces your family to do a particular household chore.
- Think of ways to persuade them to understand why this chore must be done.
- **Record** your ad using the **iMovie** or **Touch Cast** apps on the iPads.
- **Share** your videos.



Dash's Obstacle Course Challenge



New immigrants to Canada face many challenges such as:

- 1) Language Barriers
- 2) Finding Jobs
- 3) Where to Live
- 4) Money
- 5) Transportation
- 6) Cultural Differences
- 7) Racism
- 8) Weather
- 9) Missing Family from back home
- 10) New School for the Kids

Task:

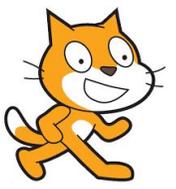
Materials: Dash; iPad; blocks and other items from the Loose Parts area

Instructions:

- 1) Select some blocks and other items from the Loose Parts area.
- 2) Plan out a challenging route for Dash to take around the blocks and items that you have chosen.
- 3) Use the Go, Path, or Blockly app on the iPad to get Dash around the obstacle course!
- 4) With your group discuss what parts of the obstacle are most challenging.
- 5) Create a new course for Dash.



Creating Bhangra Music with Code



Task:

Materials: Chromebook; iPad



Instructions:

- 1) Scan the QR Code to listen to Bhangra Music. Try to identify the different musical instruments.
- 2) Go to the **Scratch** website: www.scratch.mit.edu
- 3) Click 'Create' and watch the video entitled: *Make Music*
- 4) Code your own version of Bhangra music using the Scratch instruments.
- 5) Share your music with your group.
- 6) How do you think Bhangra Music has changed over the years?

KEVA Planks: Black Architects that Shaped our World



David Adjaye & Phil Freelon:
**National Museum of African
American History and Culture in
Washington, D.C. - 2016**

Paul Williams:
**Theme Building at LAX Los
Angeles - 1961**

**Beverly Loraine Greene: The
First Black Woman Architect -
UNESCO Building in Paris,
France - 1952-58**

Challenge:

- Use the KEVA Planks to recreate one of these structures designed and built by talented Black Architects.
- How many Planks did you use?
- What were some of the challenges?
- Can you disassemble it without making it tumble?

KEVA Planks: Black Architects that Shaped our World

MORE KEVA Plank Challenges:

Bridge or Tower Relay:

- Each team gets 200 KEVA planks.
- Each team must build a bridge or a tower of any shape with their planks.
- Once the structure is completed using all 200 planks, the team must work together to dismantle it without allowing it to topple and reassemble it on the opposite side of the room.
- You can only use your hands to carry the planks. No shirts can be used as buckets.
- The first team to complete the second bridge is the winner.

Sculptionary:

- Divide yourself into even teams.
- One student from the team selects a Sculptionary card that is in the bag and tries to build a representation of that object while the other members of their team try to guess what is being built. Use the timers on the iPads and allow 2 minutes per team.
- Keep score and the winning team is the one with the most successful guesses.