UBD Unit Plan		
Teacher: Katie Philip	**Subject: Math**	**Grade: 1**
Unit Title: Geometry		
Context (ELA Only):	**Type of Unit (ELA only):**	
Time Frame: 3 Weeks		

STAGE ONE: IDENTIFY THE DESIRED RESULTS

Outcomes Addressed in the Unit
SK curriculum outcomes can be copied and pasted, focuses highlighted.

Math: Spatial Sense (SS)

SS1.2 Sort 3D objects and 2D shapes using one attribute, and explain the sorting rule.

(a) Sort a set of familiar 3-D objects or 2-D shapes using a given sorting rule.
(b) Sort a set of familiar 3-D objects using a single attribute determined by the student and explain how the objects were sorted.
(c) Sort a set of 2-D shapes using a single attribute determined by the student and explain how the shapes were sorted.
(d) Determine the difference between two given pre- sorted sets of familiar 3-D objects or 2-D shapes and explain a possible sorting rule used to sort them.

SS1.3 Replicate composite 2D shapes and 3D objects.

(a) Select 2-D shapes from a set of 2-D shapes to reproduce a composite 2-D shape.
(b) Select 3-D objects from a set of 3-D objects to reproduce a composite 3-D object.
(c) Predict and select the 2-D shapes used to produce a composite 2-D shape, and verify by deconstructing the composite shape.
(d) Predict and select the 3-D objects used to produce a composite 3-D object, and verify by deconstructing the composite object.

SS1.4 Compare 2D shapes to parts of 3D objects in the environment.

(a) Identify 3-D objects in the environment that have parts similar to a given 2-D shape.

ELA: Compose and Create (CC)

CC1.4 Write and share stories and short informational texts about familiar events and experiences in a minimum of five sentences.

e) Create short texts including informational texts, autobiographical narratives, imaginative stories, and poems with own ideas following a model.
f) Write brief explanations and descriptions (accompanied by pictures) of real objects, persons, and places

ELA: Comprehend and Respond (CR)

CR1.1 Comprehend and respond to a variety of grade-level texts (including contemporary and traditional visual, oral, written, and multimedia) that address:

- identity (e.g., All About Me)
- community (e.g., Friends and Family)
- social responsibility (e.g., Conservation) and relate to own feelings, ideas, and experiences.

a) View, listen to, read, and respond to a variety of texts including First Nations and Métis resources that present different viewpoints and perspectives on issues related to identity, community, and social responsibility.

Treaty Education Outcome (TR)

TR1[1] Examine how sharing contributes to Treaty relationships.

- Explore, using family and community members as a resource, the diverse views on what it means to share (e.g., the land and resources from the land on which we live).

Social Studies: Power and Authority (PA)

PA1.2 Analyze the causes of disharmony and ways of returning to harmony.

(d) Discuss examples of solutions to disharmony in the family, classroom, and the playground.

Big Ideas/Enduring Understandings **What do you want students to understand and be able to use several years from now?** **What are the BIG ideas?**	**Essential Questions** **Open-ended questions that stimulate thought and inquiry linked to the content of the enduring understandings.**
There is a difference between 2D shapes and 3D objects. You can find both 2D shapes and 3D objects in our environment and 2D shapes can be found within 3D objects. An attribute can help us to see how things are different or the same. Shapes and patterns are all around us. Sharing can occur in many forms. There is a difference between harmony and disharmony.	How do attributes help us to sort things? What is the difference between 2D shapes and 3D objects? How are shapes and objects related and how can individual shapes come together to form new shapes? Where can you find 2D and 3D shapes in the environment? What does sharing mean to you? What are some ways that you can share (besides your toys)? How can I make decisions to create peace and harmony?
Knowledge and Skills (Students will know and do…) **What key knowledge and skills will students acquire as a result of this unit?** **(These may be indicators from the curriculum)**	
Knowledge (Students will know…) **What key knowledge will students acquire as a result of this unit?**	**Skills (Students will know how to do…)** **What key skills will students acquire as a result of this unit?**
Students will know what 2D shapes are. (Circle, square, rectangle, triangle, hexagon, pentagon) Students will know what 3D objects are. (Sphere, cylinder, cone, pyramid, prism, cube) Students will know there is a difference between a 2D shape and 3D object. Students will know what an attribute is. (Edge, vertices/corner, faces/sides)	I can sort 2D shapes and 3D objects when given a sorting rule. I can make up a rule, sort 3D objects and explain the rule. I can make up a rule, sort 2D shapes and explain the rule. I can explain the sorting rule when looking at pre-sorted 2D shapes and 3D objects. I can use 2D shapes to copy what someone else has made. I can use 3D objects to copy what someone else has made.

Students will know that they can sort objects and shapes. Students will know what a sorting rule is. (color, size, shape, rolls/slide/stack) Students will know what a composite shape is. Students will know what it means to replicate a shape or object. Students will know that they can find 3D objects in the environment. Students will know that 2D shapes can make up 3D objects. Students will know they can compare 2D shapes and 3D objects. Sharing occurs in many forms. We can share thoughts, ideas, goods, services, etc. There are many ways to create peace and harmony. Peace and harmony are about listening to yourself and others.	I can choose the 2D shapes I need to copy what someone else has made and check to see if I'm right. I can choose the 3D shapes I need to copy what someone else has made and check to see if I'm right. I can find 3D objects around me that are like 2D shapes. I can explain the many ways to share with others. I can share with my peers in school and those around me. I can gather examples of causes of disharmony in the classroom, the playground, and the family.

STAGE TWO: DESIGN ASSESSMENT EVIDENCE

Assessment Evidence

Summative Assessments/Performance Tasks

Assessments of what students know and can do aligned to the outcomes. They are a snapshot in time used for reporting and evaluating.

Outcomes/Objectives	
SS 1.2 3D Object Sorting Cut/Paste, Write the Rule	
SS 1.3 Create 3D objects with Playdough	
SS 1.3 Create 2D shapes with toothpicks/marshmallows	
SS 1.4 Compare 2D & 3D in the environment	

Formative Assessments

Through what multiple sources of evidence will students demonstrate their understanding on a continual basis? These help guide instruction and provide feedback to students.

- 2D matching image to word bank
- Construct 2D shapes on geo board
- Draw 2D shapes on geo paper
- Playdoh shape mats
- popsicle stick sets
- small group sorting activity
- 3D Shape Sort Mats
- Replicate composite shapes/objects
- compare 2D & 3D in the environment
- Shapes in Our World Roll & Cover
- replicate composite 2D shapes
- replicate composite 3D objects
- Mystery Bag Writing Activity

Pre-Assessments

Pre-assessments are used to determine what students know and their readiness level to inform instruction.

- class survey of knowledge on 2D shapes and 3D objects
- brainstorm list of shapes
- observation of group sorting activity

STAGE THREE: CREATE THE LEARNING PLAN

Instructional Plan

The Instructional Plan should include a sequence of lessons, teaching strategies, and information on First Nation, Inuit and Metis Content integration and technology integration.

1. 2D Pre-assessment
    - Hands up if you know what 2 Dimension means? 3 Dimension? Can you name a 2D shape? A 3D Object?
    - Brainstorm shapes together, creating a list on anchor chart or whiteboard
    - Read A Shape Is Just A Shape book
    - students fill out worksheet to create class book **(formative)**
    - Introduce names of shapes/objects and add to the brainstormed list
    - 2D shape matching to word bank worksheet **(formative)** (Read out loud for students that can't read on their own, or pair students)

2. Create an anchor chart with 2D shapes
    - discuss attributes
    - https://youtu.be/7aStqhksCuY Secret Agent Shape hunt
    - have students count the vertices/points of 2D shapes
    - students create 2D shapes using popsicle sticks and pipe cleaners. **Observe** and **conference** with students throughout activity. **(formative)**
    - **Exit ticket** - write the number of vertices on given shape on handout **(formative)Construct** 2D shapes on geoboards

3. Sorting 2D Shapes
    - Sorting video & demonstrate sorting with student sorting
    - 2D shapes with pattern blocks, creating sorting rule. Observe and conference. **(formative)**
    - Rectangle sorting sheet **(formative)**

4. Composite 2D Shapes
    - video
    - Use pattern blocks to replicate composite shapes. Observe students.
    - What is it Made Of worksheet **(formative)**

5. Read Aloud

- The Greedy Triangle https://www.youtube.com/watch?v=kPuI4XyyZUE
- Introduce 3D shapes through book
- Shapes in our World activity - comparing 2D to 3D shapes in the environment (**formative)**

6. **Relationship between 2D & 3D Shapes**
   - Captain Invincible book
   - Create 3D Shapes out of playdoh to see relationship between 2D & 3D

7. **Sorting 3D Shapes**
   - Have students sort set of objects together and explain why they sorted that way **(Observe, annecdotal notes)**
   - Explore 3D objects with examples of household objects (pop can, glue stick, dice, ice cream cone, etc)
   - Discuss ways to sort the objects, explain how to create a rule: sort by shape

8. **3D Sorting**
   - Review 3D shapes
   - Guess My Rule game - powerpoint
   - Give students pattern blocks and have them come up with their own sorting rule in partners and see if they can guess the sorting rule **(formative, conferencing)**

9. 3D Shape Hunt
   - locate 3D objects in the classroom with a list of objects to check off
   - come back together to identify characteristics/attributes
   - Handout: cut and paste 2D shapes and 3D objects into 2 groups, write sorting rule **(formative)**
   - **https://youtu.be/dsR0h50BiFQ Shapes in the world video**

10. 3D Shape Sorting
    - https://www.playdoughtoplato.com/wp-content/uploads/2016/12/3D-Shape-Sorting-Mats.pdf
    - 3D Shape Sorting Mats: in pairs or small groups have students sort the item cards by shape **(formative)**

- Handout - individually complete cut and paste sorting activity with 3D shapes. Write the rule. **(summative)**

11. Replicate Composite 2D Shapes
    - Students replicate design using tangrams **(formative)**
    - https://missgiraffesclass.blogspot.com/2016/04/composing-shapes-in-1st-grade.html
    - verbally discuss what shapes make up the design
    - Shape Detective: Look and color shapes in picture (early finishers) **(formative)**
    - **https://youtu.be/G8cPfUCfdMs The Shape of things**

12. Replicate Composite 3D Shapes
    - Given a bag of 3D objects, students will create their own structure. **(formative)**
    - gallery walk in small groups to see other's creations
    - Shapes in our World Roll & Cover **(Formative)**

13. Shapes in the Environment
    - Sharing Circle by Theresa "Corky" Larsen-Jonasson
    - Discuss the ways in which to share, difference between peace and disharmony (storytelling, goods, services, talents, thoughts, culture)
    - Wampum belt history - discuss sharing through storytelling, used as currency
    - https://www.teacherspayteachers.com/FreeDownload/Native-American-Comprehension-Passage-Main-Idea-Vocabulary-1543360
    - ELA comprehension activity (formative)

14. Shapes in the Environment
    - creating the wampum belt, using 2D shape patterns
    - https://www.teacherspayteachers.com/Product/Wampum-Belt-2882065
    - http://tenkidsandadog.blogspot.com/2014/09/wampum-designs-for-kids.html

- Discuss different shapes that can be made out of the beads. Have students color their pattern and shapes onto the recording sheet. (Formative)
- Each student can create their own wampum out of pipe cleaners and bead weaving

15. Shapes in the environment
    - Shapes in our World Roll & Cover for review (Formative)
    - https://www.teacherspayteachers.com/Product/2D-3D-Shapes-Activities-Bundle-Practice-and-Play-1771164
    - Flip through magazines/indigenous books to search for shapes in the environment (Inukshuk, Tipi, Circle of Courage, Medicine Wheel, Hoop Dancers)
    - sticky note shapes and objects they find
    - draw picture and explain what objects/shapes you have found (summative)
    - Rubric SS 1.4

    - Flip through magazines to search for shapes in the environment
    - cut out shapes and objects they find
    - create collage **(summative)**
    - **Rubric SS 1.4**

16. Mystery Shape **Writing** Activity **(Formative)**
    - I will provide each student with a paper bag containing a mystery object.
    - Student will write 5 sentences about their mystery shape.
        1. I am a 2D shape/3D object.
        2. I have _____ edges.
        3. I have _____ faces.
        4. Clue about where to find the object in the environment. Ex: I can be found in most
        5. Clue about how to use the object. Ex: I eat it for breakfast. You kick it.
    - TIME PERMITTING: Have students take turns reading out their clues for the others to guess.

- Read for students that are unable to read yet. For students that struggle to write, have them dictate their clues, write in highlighter and they can trace.

17. Create 3D objects **(Summative)**
    - Option 1: give students cards with 3D objects that they can replicate out of playdough or clay
    - Option 2: students can create structure using recycled materials/household objects and list shapes that are used (must have x# of 3D objects)
    - **Rubric SS 1.3**

Key Resources