

Topic: How Many? Numeracy and Vocabulary in the Primary Grades

(Lesson by Becky Greenhow, SD79 Cowichan)

Lesson Plan Objectives:

Students will be able to identify and name the Coast Salish Design Elements (Trigon, Crescent, Extended Crescent, Circle, Oval) and use Hul'q'umi'num' numbers to count objects and attributes in the print and in their environment.

Coast Salish Weave Collection Print: CONSERVATION

Artist: Chris Paul

First Peoples Principles and Perspectives

Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place)

Learning is embedded in memory, history, and story

Learning involves patience and time

Big Ideas: Where are we going?
What will we understand? What will be remembered?

- 1-to-1 correspondence and a sense of place value are essential for number fluency (Mathematics).
- Objects have attributes that can be described, measured and compared (Mathematics).
- Living things have observable features that help them survive in their environment (Science).
- Through listening and speaking, we connect with others and share our world (Language Arts).

Curricular Competencies

Content

Mathematics

- Use mathematical vocabulary and language to contribute to mathematical discussions

Science

- Share observations and ideas orally; experience and interpret the local environment; consider environmental consequences of one's actions

Language Arts

- Use language to identify, create, share ideas, feelings, and personal identity

Mathematics

- Number concepts 10-1000, patterning, attributes of 2D/3D objects, one-to-one correspondence

Science

- Adaptations of local plants and animals; First Peoples knowledge of local plants and animals and their uses.

Language Arts

- Oral language strategies, letter formation, theme-based vocabulary

Resources and Materials

- Salish Weave Collection (Print "Conservation" by Chris Paul) and easel
- Wooden Coast Salish Design Element shapes
- Laminated Coast Salish Design Element posters, counting/Hul'q'umi'num' posters, recording cards, scavenger hunt cards.
- Book and TG: How Many? By Christopher Danielson

Lesson Activities

Lesson 1

- ***Have children form a circle around the outside of the carpet.
- Show children the framed print "Conservation" and explain that this was created by a local Indigenous artist, Chris Paul. (Background: Chris Paul is from Tsartlip by Brentwood Bay in Saanich.)
- Ask children what they notice about the print. Are there any patterns or shapes or colours that they recognize in the artwork? Continue discussion using Visual Thinking Strategies (youtu.be/aVzcknOWpaE). Add in the question HOW MANY? to the items/attributes they point out.
- The title of this print is Conservation. What does that mean? Discuss.
- Introduce wooden Coast Salish Design Elements one at a time, naming and passing around the circle. The elements included are: Trignons, Crescents, Extended Crescents, Circles, Ovals. Explain that Coast Salish artists use these shapes to create beautiful images. When the pieces make it around the whole circle, ask HOW MANY? of each shape do they see.
- Ask for volunteers to find the shapes in the pile of blocks.

Lesson 2

- Using the laminated SHAPE posters, review the names of the Coast Salish Design Elements. Practice counting the shapes in the bin.
- Remind the students how our Cultural Teaching Assistant visits our classroom and teaches us about Hul'q'umi'num', the language of the local First Peoples in Cowichan. Today we are now going to learn and practice how to count in Hul'q'umi'num. Bring out the laminated NUMBER posters with the QR codes (Teacher will need to upload a QR READER onto a device in order to scan the code).
- Scan each QR code for the pronunciation of the Hul'q'umi'num numbers. Repeat as desired.

Lesson 3

- Revisit the print of Conservation. Ask the students again How Many? Perhaps they will see only shapes, but maybe they will count other items like colours, animals, frames from the print. Encourage them to see other features like straight lines, curved lines, and count those attributes in Hul'q'umi'num.

Reflections

- Place the activity bin on the provocation table and encourage counting, creative design, and shape hunts during discovery play time. Provide whiteboard markers to students to practice drawing the shapes and record their thinking.

Assessment

From the Classroom Assessment Resources Package for Math:

<https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/assessment/classroom-assessment-resource-package-math.pdf>

Observe and converse with students:

- Ask questions that demonstrate curiosity and wonder.
- Pose new questions and problems
- Make connections between First Peoples worldview and mathematical concepts
- Connect mathematical concepts with other math concepts, with other areas of learning, and with personal interests.
- Reflect on mathematical thinking of self and others.
- Create visual representations of mathematical ideas.
- Represent ideas in concrete, pictorial and symbolic forms.

After the task, students reflect on their learning by answering questions or recording their thinking on the non-permanent cards. Such reflections provide information and evidence of student thinking for teachers to gather, interpret, and act upon.