

## QUILLS

Queen's University Indigenous Land-Based Learning STEM Queen's University Biological Station

### Shelter - Wigwams

#### Organization:

Title: Shelter - Wigwams

**Summary**: Students learn about the cultural significance of wigwams to the Anishinaabe and engage in an interactive hands-on math activity where they calculate the diameter, area, and circumference of where a wigwam would be constructed using number of steps and other body parts to approximate distance. As an extension students can examine how harvesting materials at different times of the year impacts tree growth and forest health.

**Inquiry Question:** Inquiry Question 1. What are some local culturally significant tools and technologies that when utilized enter local Indigenous groups into a relationship of reciprocity with the natural world?

**Duration:** Approximately one class period

Learning Environment: Outdoor

Season: Summer, Spring, Fall

Materials:

- Wigwam Backgrounder.pdf
- Large, flat outdoor space
- Meter sticks
- Harvesting Extension.pdf

#### Curriculum Links:

Grade 7 Science and Technology: A1.1, A1.3, A3.3, B1.2, B1.3, B2.5 Grade 9 Science: A1.1, A1.3, A2.5, B1.3 Grade 9 Academic Geography: C1.4

#### Meta Data:

Content Type: Activity Bundle: Tools Theme: Invasive Species Subject Area: Biology, Mathematics, Music, Outdoor Education, Science, Social Studies Curriculum Focus: 7, 9

# We recommend inviting an Indigenous community member into the learning environment when teaching about wigwams.

- Note that there are spiritual aspects to constructing a wigwam. Wigwam construction also requires the harvesting of natural materials. Accordingly, wigwams should never be constructed with students unless an Elder or Knowledge Keeper is present, and the structure will be used in the future.
- Wigwams are made from harvested materials including soft pliable wood, cattail rushes, basswood bark, birch bark, and animal hides.



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• Teacher introduces students to Wigwams through discussion using teacher handout titled **Wigwam Backgrounder.pdf.** Students will engage in an interactive hands-on math by choosing a flat piece of land where a wigwam could be constructed. Students will start by being asked to drill a stake into the ground which marks the center of the wigwam. Students will then be given the following question and a meter stick.:

A family needs to build a structure that can sleep seven people. There are two adults who are each 170 cm tall, and five children: two are 120 cm tall, two are 100 cm tall, and one is 80 cm tall. There needs to be 30 cm between sleepers and 55 cm on each side between the sleepers and the door. There should also be a 70 cm door.

• Students will then be expected to calculate the diameter, area, and circumference of where the wigwam would be constructed using number of steps and other body parts to approximate distance. They can use the meter stick to verify the distance.

#### Extension:

With teacher guidance students examine how harvesting materials at different times of the year impacts tree growth and forest health. Instructions for extension activity are included in the handout **Harvesting Extension.pdf**.

Please note that the learning represented in these activities reflects Big Idea B. in the Indigenous Knowledge Learning Bundle: "Indigenous Knowledge is Place-Based". To help your students learn more about this Big Idea check out the Learning Activities titled: *Land-Based Meditation, Land Acknowledgement Workshop, Ceremony Ensures Right Relations with the Land, The Clan System,* and *The 13 Moons* found in the *Indigenous Ways of Knowing and Being with the Natural World* Learning Bundle (Grades 7-10).