



## ACTIVITY PLAN

# Orca Families

In this activity you will explore orca families, looking closely at the southern residents as an example. Just like human families, orcas learn from elders in their communities.

### Materials

- Sticky notes (enough for at least 6/student) or a digital tool such as Google's Jamboard
- Pencils/pens
- Internet enabled device for individuals or small groups of individuals (computer, chromebook, tablet, smartphone, etc.)
- Access to "[Meet the Whales](#)" on the Whale Museum website
- Chart paper or white board
- Markers
- Recorded webinar of [RBCM@Home: Resident Orca Family Structure](#) with the Royal BC Museum and Parks Canada

### Directions

#### Hook

1. Introduce the "See, Think, Wonder"<sup>1</sup> routine to the class:
  - a) See - These are fact-based (objective) observations that are based on what they view.
  - b) Think - These are opinion-based (subjective) statements that individuals think about what they view.
  - c) Wonder - These are subjective questions that individuals wonder about as they view.
2. Allow the students to explore the "[Meet the Whales](#)" on the Whale Museum website while using their sticky notes to record first a "See", then "Think", and finally a "Wonder" about the Southern Resident orcas.

<sup>1</sup> Harvard Graduate School of Education. (2016). See, think, wonder. Project Zero. <http://www.pz.harvard.edu/resources/see-think-wonder>

3. Invite your students to share what they found most interesting on the “Meet the Whales” website. If it wasn’t noted, be sure to point out the following key points:
  - a) There are 3 pods in the Southern Resident orcas: J, K and L.
  - b) Each orca has both a designation number and a name (i.e. J-19, Shachi).

## Main activity

4. In a think, pair, share format, have the students brainstorm a list of useful skills or knowledge that they learned from their parents/guardians, grandparents, or elders in their community. Have them record three of their ideas on sticky notes or using the digital tool. Some prompts to help guide them based on the statement, “think of a time when many generations of your family or friends came together.”
  - a) What kind of stories do you share?
  - b) What kinds of activities do you do?
  - c) What places do you visit?
5. Watch “RBCM@Home: Resident Orca Family Structure” from timestamp 12:03 to 16:55 to learn about the families of the southern resident orca population.

6. Draw a Venn diagram (Figure 1) on the chart paper or white board and have the students stick their sticky notes of learnings (skills or knowledge) where appropriate.

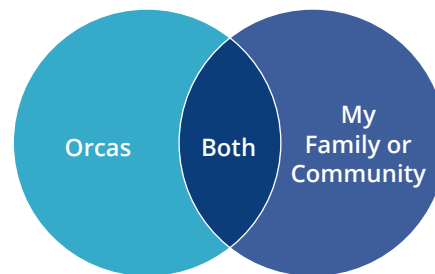


Figure 1: Intergenerational learning Venn diagram

- a) Intergenerational learning in orcas includes the following:
  - i) Vocalizations, or calls
  - ii) Prey preferences
  - iii) Hunting techniques
  - iv) Behaviours

## How This Helps Us #knowtheocean

Interesting scientific words are highlighted in blue!

- Orcas are **matrilineal**, meaning that they live in groups with the oldest female as the leader of the pod.
- Prey preferences, hunting techniques, **vocalizations**, and behaviours are all taught to the younger orcas in what is known as **intergenerational** learning.
- **Data**, including **hydrophone** data, vessel (ship/boat) traffic, and water quality, about the ocean can help scientists understand the ocean, which in turn enables the general public and governments to make informed decisions about orca protection.

## Glossary

**Culture:** The characteristics and knowledge of a particular group (i.e. language, cuisine, social habits)

**Data:** A group of facts or information about something that can be measured (i.e. water temperature)

**Hydrophone:** A scientific instrument used to collect sounds underwater

**Intergenerational:** More than one generation or age category (i.e. child, parent, grandparent)

**Matrilineal:** Families based on the mother’s line

**Vocalizations:** Making of a sound, especially for communication purposes