

Focus:

Identify forms of life in the wetlands and examine their roles in the wetland ecosystem. The examination of roles of each plant and animal will be extended to include uses by Aboriginal people.

Curriculum Connection:

5.10-5 Understand and appreciate that all animals and plants, not just the large ones, have an important role in a wetland community

Teacher Preparation:

1. Preview the film "Two Sciences" prior to presenting this lesson.
2. Photocopy enough "All Things Big and Small" worksheets for each student in the class. Review the worksheet prior to teaching the class.

Materials and Resources Required:

» "All Things Big and Small" worksheet



» DVD/Online Video "Two Sciences"
www.sacredrelationship.ca/videos

Launch

Introduce the concept that each and every plant or animal that exists in a wetland ecosystem is a member of a community and that as such, each has an important role to fulfill. This can be compared to our own communities. Everyone has an important role, from the youngest, tiniest baby to the largest man to the oldest, wisest grandmother.

Note to Teacher :

This lesson plan will likely take 2 or 3 class periods to complete. The first class period will likely be taken up on Launch and Activate as far as the completion of the worksheet. The second class period will be needed for research and poster preparation. Depending on the length of class periods there may be the need for the third period for poster presentations.

Key Learnings:

- » Each type of animal and plant that exists in a particular wetland ecosystem has a role and contributes to, and benefits from, the existence of that wetland community
- » To disturb or destroy any one species of a wetland community can lead to the destruction of the entire wetland
- » By using the benefits of both western science and Aboriginal science we would have all of the information needed to fully understand and protect wetland ecosystems



DID YOU KNOW :

THAT WHEN ABORIGINAL PEOPLE TAKE PLANTS,
ANIMALS OR BIRDS FOR THEIR OWN USE, THEY OFFER
TOBACCO TO GIVE THANKS FOR WHAT THEY ARE TAKING?

Activate:



Distribute the “All Things Big and Small” worksheet and tell students that they will see and hear the answers to the questions in the video “Two Sciences” that they are about to view. Let students know that they will have time to complete the worksheet once the video is finished.



View the film with students, allowing them to fill in some of the answers to their worksheet questions while watching the video. Once the video is finished allow 5-10 minutes for students to work on their own prior to inviting students to get into partners or small groups to discuss their responses.

Connect:



Once students have completed and discussed their responses on the “All Things Big and Small” worksheet each pair or group will be invited to choose one of the plants, animals or messages (i.e. scientists and aboriginal people working together) mentioned in the video and conduct further research and compile their findings into an informational poster. When all groups have completed their posters have the students gather together as a class and invite each group to present their poster and share their findings.

Facilitate a discussion, throughout the presentations, that will lead to student understanding that ALL plant and animal life, big or small, are critically important to the survival of wetlands and to human beings.

All Things Big and Small Worksheet

NAME: _____

1. List 3 different foods that Len identifies as being important for Aboriginal people.

2. What medicine does Len tell Suzanne about in the video?

3. What role does Len say the beaver plays in the wetland?

4. What is the difference between the tree stump cut with a chainsaw and the tree stump left by the beaver?

5. What does Suzanne say about the beaver? What does she say she would like to change about people's thinking regarding the role of the beaver?

6. What did the pipeline people mean when they told Len that beavers are not an endangered species?

7. What does Len call the wetland?

8. What was Len and Suzannes' message about each and every plant and animal species?

9. How does Suzanne compare her knowledge of the wetlands ecosystem, as a western scientist, to the knowledge of Aboriginal people and Elders?

10. How does Suzanne describe western science compared to Aboriginal science?

11. What is the overall message of the video?

12. Complete the following chart for any 3 plants and 3 animals seen in the video. You may have to do extra research to complete all fields of the chart.

Species of Animal	Size Range	Role	Use by Aboriginal People

Species of Plant	Size Range	Role	Use by Aboriginal People

All Things Big and Small Worksheet

NAME: _____

1. List 3 different foods that Len identifies as being important for Aboriginal people.

Ducks, cattail roots, duck and goose eggs.

2. What medicine does Len tell Suzanne about in the video?

The fluff on the top of the cattail that can be used for burns.

3. What role does Len say the beaver plays in the wetland?

The beaver changes the flow of the water.

4. What is the difference between the tree stump cut with a chainsaw and the tree stump left by the beaver?

The chainsaw cuts the stump straight across at the top so when it rains the water sits on top of the stump and is absorbed so the stump doesn't decompose very quickly. The beaver cuts the tree off at an angle. The rain runs off of the stump so it dries up and decomposes quickly and goes back into the earth.

5. What does Suzanne say about the beaver? What does she say she would like to change about people's thinking regarding the role of the beaver?

Suzanne says that the beaver builds dams to help the water stay on the land. She says would like to change people's thinking about beavers being a pest. People need to know that the beaver dam's keep the water from running off the land.

6. What did the pipeline people mean when they told Len that beavers are not an endangered species?

They meant that a destroying a beaver dam would not be a good enough reason to change the proposed location of a pipeline.

7. What does Len call the wetland?

The kidney of the world.

8. What was Len and Suzannes' message about each and every plant and animal species?

Their message is that every part of the wetland, every species, has a role that is important.

9. How does Suzanne compare her knowledge of the wetlands ecosystem, as a western scientist, to the knowledge of Aboriginal people and Elders?

She says that when she goes to a wetland she develops a hypothesis based on what she sees then she goes back to the lab to test it and that she gets a 'yes or no answer'. Suzanne says that the Aboriginal people and Elders have a much more comprehensive understanding and that they are very analytical.

10. How does Suzanne describe western science compared to Aboriginal science?

Suzanne says that western science is much more "narrow" than that of Aboriginal people.

11. What is the overall message of the video?

The overall message is that if we were to take the knowledge, science and wisdom of the Aboriginal people and Elders and use that with western science we would have a greater opportunity to preserve wetlands.

12. Complete the following chart for any 3 plants and 3 animals seen in the video. You may have to do extra research to complete all fields of the chart.

Species of Animal	Size Range	Role	Use by Aboriginal People
Goose	Medium	Lays eggs	Food (meat and eggs)
Duck	Medium	Controls fish population	Food (meat and eggs)
Beaver	Medium	Keeps water from draining off of the land	Food

Species of Plant	Size Range	Role	Use by Aboriginal People
Willow	Large	living space for plants and small animals	Sweat lodge frame, medicine, tobacco
Cattail	Medium	Removes arsenic from water and soil	Food, medicine, dressing for wounds
Muskrat Root	Small	provides nutrients to the plant	Medicine