

HSBC Fraser River Sturgeon Education Program



Secondary Module Instructional Rationale and Introduction

The Balancing Act

For more than 98 million years sturgeon have lived on this planet. Enormous changes have taken place over the course of many millennia yet the Sturgeon has managed to adapt to the environmental challenges of a planet in constant flux. The dinosaurs have come and gone but the sturgeon lives on.

The arrival of humans on the coast of BC roughly 13,000 to 10,000 years ago has added a new twist to the evolutionary tale of this amazing fish. The aboriginal subsistence fishery lived in balance with the ecosystem that sustained them. Only since the arrival of Euro-Canadian settlers did the commercial harvest of many species, including the White Sturgeon, change a balance that had existed since time immemorial. One could argue that Sturgeon have never faced a greater challenge than they do now competing with this new group of humans and their environmental impacts in order to survive.

Finding a sustainable balance between the competing interests of those connected to the Fraser River watershed is a huge challenge. The following instructional guide is designed to get students thinking about this important species and its place in the web of life of the Fraser River watershed.

The first lesson taps into students' prior knowledge and asks them to predict why the White Sturgeon of the lower Fraser River watershed is endangered. Students will study the life cycle of the white sturgeon and consider the impact of human activity on this vulnerable species.

The second lesson asks them to explore land use and river management issues through satellite air photo interpretation. Students will develop their satellite air photo interpretation skills, map sketching skills and make connections between human activity and White Sturgeon habitat degradation.

Lesson three asks students to interpret historical documents and come to an understanding of the historical concerns for fishery conservation as expressed by First Nations chiefs in 1902. Students are asked to create their own speeches, placing themselves in the shoes of the First Nations leaders who foresaw the demise of Fraser River fishery.

Lessons four, five and six will ask students to role play and research the various stakeholders who are currently engaged in a variety of economic activities along the banks of the Fraser River. These stakeholders include Angling guides, Commercial Salmon Fishers, First Nations, Gravel Extraction Companies, Lumber Mills, Urban Planners, the Ministry of the Environment (MOE) and the Fraser River Sturgeon Conservation Society (FRSCS). Students will be asked to assume a stakeholders position and represent that position at a symposium that brings together the various groups. Students will be expected to put together a resource management plan which takes into consideration the viewpoints of all stakeholders. This activity will demand at least two classes with a third committed to taking draft

documents for a management plan and turning them into a final working proposal. Teachers will need to provide time for these groups to research their roles and their various positions.

While the white sturgeon has been listed as endangered by the Species at Risk Act (SARA) no action plan has been implemented to work toward its protection as an endangered species. This is a serious concern and needs public awareness and support to give this conservation movement teeth and efficacy. Giving students agency to bring about meaningful change empowers them to see that they can be the change they want to see in the world. As groups of students engage in this learning process and put forward their own recommendations perhaps more political, economic and social pressure can be brought to bear on this important issue – saving the sturgeon species from extinction.

These student designed proposals can be sent to the Fraser River Sturgeon Conservation Society and to the Ministry of the Environment.



Curriculum links and rationale:

Students will be able to ...

- analyse the factors threatening the survival of the White Sturgeon in the Fraser River system.
- develop air and satellite photo interpretation skills.
- explain possible consequences of resource management decisions and assess some of the ways that humans use various key resources.
- explore the concept of resource sustainability.
- explore historical fishing practices of the First Nations people, interpret historical documents and gain insight into early calls for fishery conservation through a First Nations lens.
- develop speech writing skills
- investigate the possible socio-cultural, economic, and political consequences of various resource-management solutions. This case study will look at the different points of view related to the resource management and use of the Fraser River system with a particular focus on the Sturgeon Conservation Program.
- explore the benefits and drawbacks of practices associated with the forestry industry, the fishing industry, water management, mining, farming in the Fraser Valley and flood management.
- identify and debate different points of view related to resource management and use.
- consider assumptions and priorities, to analyse and interpret data, and consider the ethics of resource management.
- create a Sturgeon management plan that takes into consideration the socio-cultural, economic, environmental and political challenges of resource use.