

# My River My Home

An activity kit for educators about the sustainability of the Fraser River



Created by:





## Acknowledgements

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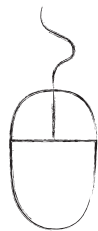
## Activity 1.3 What is my Ecological Footprint?

Water is just one part of our ecological footprint that is based on how much energy and natural resources we use. The Department of Fisheries and Oceans has developed a comprehensive tool for students to calculate their ecological footprint. Students add up points for their water use, food, housing, transportation, and entertainment choices which are translated into an ecological footprint. See the full lesson plan and other resources at <http://www.pac.dfo-mpo.gc.ca/education/lessonplans-lecons/empreinte-eco-footprint-eng.html>.

### What You Need:



**at least  
60 minutes**



**download the ecological footprint calculator from the Department of Fisheries and Ocean website:**

[http://www.pac.dfo-mpo.gc.ca/education/documents/empreinte-eco-footprint/ecofootprint\\_handout\\_e.pdf](http://www.pac.dfo-mpo.gc.ca/education/documents/empreinte-eco-footprint/ecofootprint_handout_e.pdf)

### What You Do:

- Have students fill out the ecological footprint handout. Younger students may need to complete the form at home with their family.
- What choices have the biggest impact on our ecological footprint? What changes would reduce our eco-footprints?
- How are our ecological footprints connected to the health of the Fraser River? In addition to water use, think about transportation choices, and imported foods and goods, etc.
- Optional: Choose an on-line ecological footprint calculator and compare results.  
<http://www.myfootprint.org>  
[http://www.panda.org/how\\_you\\_can\\_help/live\\_green/footprint\\_calculator](http://www.panda.org/how_you_can_help/live_green/footprint_calculator)
- Optional: Tim Turner's "How Big is my Ecological Footprint" provides a good alternative (Teaching Green, The Middle Years)

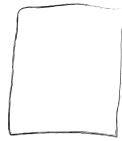
## Activity 2.9 Industry and the Environment - a Pulp Mills Role Play

How can we balance industry with other uses of the Fraser? Owners of the Fraser Reach Pulp and Paper Mill would like to open a new mill on the Fraser River. Many different groups have an opinion on the proposal including local townfolk, mill owners, agriculturalists, the Green Earth environmental group, the local Aboriginal group, and the business beside the proposed site. A town hall meeting has been set up for each group to support or oppose the development. In this activity, students will take on one role in this meeting, research and prepare a series of arguments to support their position that will be presented in class.

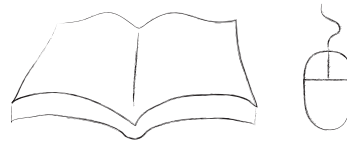
### What You Need:



**2+ hours**



**2.9.1**



**research materials**

### What You Do:

- Talk about how pollution enters the Fraser River. A pulp mill is an example of point source pollution, where the source of the pollution is identifiable, and can be measured and controlled.
- Discuss how a pulp mill uses water, and what potential pollution it might create.
- Brainstorm the scenario as a group to help students see the complexities of the issue. Use handout 2.9.1 to begin the discussion. Students will need to do additional research, or flesh out the stories to create their position.
- Break class into six groups to present at the town hall meeting.
- Ask each student group to prepare a presentation on how they think their group would respond to the pulp mill development.
- Decide as a class whether the project will be approved.

### Extensions

Research how the situation of pollution from pulp mills was handled in the 1990s on the Fraser River. It is a success story for industry and the environment that resulted in the reduction of pollution by effluent containing chlorine and toxic chlorinated organic compounds. Pulp and paper mills continue to operate along the Fraser. Research their environmental policies and discuss whether they are doing enough to protect the environment.



## 2.9.1 Pulp Mills Role Play Backgrounder

A **pulp mill** is the first part of the process in manufacturing paper and tissue. It converts wood chips and other plant materials into a thick board which is then sent to a paper mill for further processing. The pulp can be bleached or unbleached.

Pollution from a pulp mill is called **point source pollution**, because the source of the pollution can be pinpointed. In the past, pulp mills were built beside rivers for several reasons - transportation, a water source, and a way to get rid of waste water, or effluent, that contains chemicals used in pulp processes.

In the not so distant past, people used to believe that the Fraser River diluted and removed waste water with no harm to the environment. The Fraser became heavily polluted. In the 1990s, the government implemented a new policy to reduce the amount of pollution from pulp mills, by tightening up the environmental regulations. The result was a reduction of pollution.

### Background on the Role Play Groups:

**Local townsfolk:** would like to create a river front walkway, and keep air pollution to a minimum, however many people are unemployed and would welcome new jobs.

**Mill owners:** believe they have a proven track record of taking care of the environment at their other mills, and have followed the provincial government's policies and regulations. They will be bringing 75 jobs to the area.

**The Green Earth:** the local environmental group believes that a new pulp mill along the Fraser is a threat to salmon and that present government regulations are inadequate to protect the Fraser River from pollution.

The **business** beside the proposed site: A Fishing Lodge Adventure retreat centre that prides itself on its view, and is concerned that a pulp mill nearby will reduce business.

**Aboriginal groups:** The local First Nation group wants to make sure that Aboriginal people will have access to some of the new jobs and that the mill will not pollute the river.

**Agriculturalists:** Farmers using water for their crops are interested to know the steps that the mill will use to treat its effluent.