

**Locally Developed Course**  
**Grande Yellowhead Public School Division**

**Water Experience**  
**25**

**Parks Canada (Palisades) Stewardship Education Centre**

**Student - Post-Immersion Course Package**



## *Water Experience 25 Post-Immersion Sessions*

The following plans and activities are to be completed after your visit to the Palisades Stewardship Education Centre. Within this Post-Immersion package, you will find activities that will cover approximately 3 hours of classroom work.

### **Technology**

You may require access to various technologies such as internet, PowerPoint, Movie Maker programs, cameras and even video cameras for their final projects in WE 25.

### **Final Presentation**

It is recommended that you share what you have learned with your school and community. Whether this is through display boards in the school, participation in assemblies or a Water Experience night – where students can share with parents all that they have done.

In the three levels of Water Experience, there will be the following major final assignments:

WE 15

- Comparison project
- Lifelong Learning project

WE 25

- Lifestyle Analysis
- Invention

WE 35

- Trip Planning
- Careers Profile

## Session 1

Explanation & discussion of final assignments: There are two assignments and a reflection that must be completed.

- Start by reviewing your notes from the Pre and Immersion elements of the course.
- In a group, discuss how your ideas of water ecology and protection have evolved since the Pre-Immersion. Explore how water use by the environment/nature and humans are often at odds and how a balance is difficult to find in urban areas.
- For your **individual projects**, you will investigate and share your own personal water footprint. To start, visit [waterfootprint.org](http://www.waterfootprint.org) <http://www.waterfootprint.org/?page=cal/WaterFootprintCalculator> and review what was learned at the Palisades Centre during the footprint activity & presentation. Remember that the water footprint calculator is a good place to start, but the final product for this assignment is not just a number of litres of water that you use. The analysis of the information on personal water use is the most important part. Be sure to identify *direct* and *indirect* water footprints
- For your **partner projects**, you will design concepts for one or several inventions that would help humans to be better users of water. You will describe these inventions in detail, using words and pictures. (See the following handout for more information). Visit the Stockholm Junior Water Prize inventions at <http://www.siwi.org/stockholmjuniorwaterprize> and review the TED video clips for inspiration.

## Lifestyle Analysis

After learning about the eco-footprint and water footprint concepts, it is your turn to do a thorough analysis of your own water usage. Are you really using as much water as other North Americans? Or have you already taken steps to cut down? If you think about it, are there areas where you know you can make a positive difference in your usage?

Your project must outline your water use in the following areas:

- Domestic Use
- Transportation
- Consumerism
- Recreation

You will describe how much water you use and what it's being used for. You will also present some ways that you could reduce your direct and indirect water footprint.

Choose one of the following formats to present your project:

|   |                     |
|---|---------------------|
| • PowerPoint Slideshow  | • Video             |
| • Photo Essay (with detailed captions)                              | • Newspaper Article |
| • Essay   | • Blog              |
| • Or any other format you like (discuss it with your teacher first) |                     |

1. Start your project by looking at the following **water use calculators**:

Waterfootprint.org online extended calculator:

<http://www.waterfootprint.org/?page=cal/WaterFootprintCalculator> .

Canadian water use calculator:

<http://www.cbc.ca/pei/features/watercalculator/>

Simple British water use calculator:

[http://news.bbc.co.uk/2/hi/in\\_depth/629/629/5086298.stm](http://news.bbc.co.uk/2/hi/in_depth/629/629/5086298.stm)

Good water use calculator (in US gallons):

<http://www.h2oconserve.org>

Write down all the questions that you aren't able to answer on your own and talk to your teacher / parents about them. After collecting some data (see #2 below), enter your info into the Water Footprint calculator and see what your total is. You may want to try on a few different calculators to see how much your results vary.

2. You can go about **collecting data** in a variety of ways - it's not essential that your data collection methods are the same as your peers', but they must be reported. You can:



- Talk to your parents and get the water usage from your bills (this will vary depending on which community you live in). Divide the yearly total by 12 if possible because if you look at only one month, this may not give an accurate picture.
- If you have access to your water meter, take a reading each day and see what your daily usage is. You may need to contact your local water provider to see how your water usage is measured.
- Put a log-book in the bathrooms and kitchen at your house, and try to write down an approximate number of litres used (or # of flushes, # of minutes in the shower, etc.). If you can get your whole household participating, great. If you can only count on yourself to write usage down, that's OK too. You can extrapolate using your numbers.
- Do an assessment of your washing machine and dish washer. Are they newer, efficient models? Go through your house and check to see the number of litres used by each toilet. Is it 6 L or less or are they older, inefficient models? If you have time, do an assessment of the toilets you use around town - are they low-flush?
- If you cook your own meals, do your own laundry, etc. it's easy to see how much water is directly used to support your lifestyle, but if your parents do these chores, you will have to discuss with them the approximate number of loads of laundry are done, meals are cooked, etc. When you eat out or buy ANYTHING, it is not at all easy to determine how much water is used in the production of the item. Use the [waterfootprint.org](http://waterfootprint.org) site to see what is generally a better choice (coffee or tea? meat or veggies?)

A note about the Water Footprint calculators: Your water usage will always be different depending on which calculator you use. They are not perfect, sometimes calculating only your direct footprint and other times extrapolating your indirect usage based on your household income and country of residence.

3. **Analyze your usage** and describe in detail **what you could change** to become more water wise. List the things that would make the biggest difference and then also list the things that you could actually see yourself doing (for example, becoming a vegan makes a big difference, but are you ready for that?) Make a realistic plan of action for yourself and/or your family.

Check out the following site for suggestions: [http://www.h2oconserve.org/?page\\_id=3&pd=tip](http://www.h2oconserve.org/?page_id=3&pd=tip)

## Session 2

1. Go to the TED website and review one or more of the following videos which will hopefully inspire you in your quest to invent:

14 year old who built a windmill

[http://www.ted.com/talks/william\\_kamkwamba\\_how\\_i\\_harnessed\\_the\\_wind.html](http://www.ted.com/talks/william_kamkwamba_how_i_harnessed_the_wind.html)

(Click on *Interactive Transcript* at right to view text, as it may be difficult to understand everything William is saying due to his accent. A really inspiring story, if you want to look into it further.)

Water filter invention

[http://www.ted.com/talks/michael\\_pritchard\\_invents\\_a\\_water\\_filter.html](http://www.ted.com/talks/michael_pritchard_invents_a_water_filter.html)

Learning by doing

[http://www.ted.com/talks/gever\\_tulley\\_s\\_tinkering\\_school\\_in\\_action.html](http://www.ted.com/talks/gever_tulley_s_tinkering_school_in_action.html)

Eco-friendly building material

[http://www.ted.com/talks/kevin\\_surace\\_fixing\\_drywall\\_to\\_heal\\_the\\_planet.html](http://www.ted.com/talks/kevin_surace_fixing_drywall_to_heal_the_planet.html)

2. After viewing, discuss. What was interesting? What was inspiring? What point are students at in the development of project ideas?
3. Take some time to work on your own ideas. Remember that you will be handing in both projects next class, and will be presenting one to the group at that time as well.

## Invention



With a partner of your choice (or on your own), **brainstorm some inventions that would help make the world a better place, water-wise.**

You may decide to focus on one invention in detail, or several in a more general way.



For some inspiration, check out the Stockholm Junior Water Prize inventions at <http://www.siwi.org/stockholmjuniorwaterprize>

You and your partner will need to choose the format with which you feel you could best present your ideas. Here are the format options:

|  |                                     |
|--|-------------------------------------|
| • PowerPoint Slideshow                 | • Sketches (with detailed captions) |
| • Photo Essay (with detailed captions) | • Video                             |
| • Essay                                | • Newspaper Article                 |
| Or any combination of these formats    |                                     |

You will present your invention to others who may not have taken the WE course. Explanations of why the item is necessary or important will need to accompany the invention descriptions.

Remember the 5 Ws as you complete this assignment:

- **Who** designed it? Who will benefit from it?
- **What** is its purpose? What does it do?
- **Where** will it be used? (Is it for industry, households, communities, individuals?)
- **When** will it be useful? When could it become a reality?
- **Why** did you invent it? Why should it be developed?

1. Sharing time: Each student will present one project to the group. Be ready to ask each other questions after the presentations and discuss any interesting points of view or topics that arise during the presentations.
2. Next go through the Reflection Questions. Complete during class (if there is time) or e-mail their answers after.

### Student Reflection Questions

This reflection assignment will contribute to your mark in WE 25, but more importantly, the answers you give will help to improve the course for others and potentially yourself if you are interested in continuing on to WE 35.

Please answer questions on a separate sheet of paper, or if completing this electronically, insert your answers after each question and e-mail the file to: your teacher within one week.

#### Ideas

1. What is the most important thing that you learned during Water Experience 25? Why is this important?
2. What message or ideas have you / will you share with others about water recreation / conservation / rights after this course?

#### Assignments

3. Which in-class activity did you enjoy the most? Why?
4. Do you wish that you had been given more time to work on the projects? What else would you have done?

#### Influences

5. In what ways did your classmates and teacher influence your learning?

#### Technology

6. Did you find the use of technology appropriate in this course? What would you suggest for next time?

#### Collaboration

7. How did you and your peers work together in class and at the PSEC?
8. How did you and your partner make decisions about your invention project?

#### Course

9. What would you like to see changed in this course? Why?

#### Evaluation

10. What part of this course would you keep the same? Why?
11. Are you interested in taking the next course, WE 35? Why or why not?
12. What type of person would you recommend this course to? Why?