**Lesson Objectives**

The objective of this lesson is to introduce a global perspective to the water systems unit. Students will watch a video, brainstorm ideas, and examine labels on plastic water bottles. By the end of the lesson, students should be able to start thinking about the impact of their personal water usage, and of the bottled-water industry. Students will examine how the bottled-water industry contributes to waste and pollution. This lesson is really a starting point to open up discussion and exploration of environmental sustainability through a variety of disciplines – science, geography, and media literacy, for instance.

**Stage 1: Desired Results**

**Fundamental Concepts/Skills**

- Sustainability and Stewardship
- Change and Continuity

**Big Ideas/Essential Question**

- Is the bottled-water industry a necessity?

**Ontario Curricular Overall Expectation**

- Assess the impact of human activities and technology on the sustainability of water resources

**Ontario Curricular Specific Expectation**

- Assess how various media sources address issues related to the impact of human activities on the long-term sustainability of local, national, or international water systems
- Explain how human factors (i.e. bottled-water industry) cause changes in the water table
- Use a variety of forms to communicate with different audiences and for a variety of purposes

**Lesson Goals**

- Reflect on reasons as to why people purchase and drink bottled water
- Collect data from labels on plastic water bottles
- Discuss ideas and findings as a class
- Continue critical thinking as homework assignment

**Key concepts and/or skills to be learned/applied:**

<table>
<thead>
<tr>
<th>Background Knowledge:</th>
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<tr>
<td>Think critically about advertising techniques in the bottled water industry</td>
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<tr>
<td>Extract information</td>
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<tr>
<td>Communicate ideas and facts</td>
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<tr>
<td>Understand that water is crucial to life on Earth</td>
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<tr>
<td>Knowledge of how a Think, Pair, Share activity operates</td>
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**Stage 2: Planning learning experience and instruction**

**Student Groupings**

- Individual
- Pairs
- Groups of four (tables)

**Instructional Strategies**

- Demonstration
- Viewing video
- Student-lead discussions, presentations
- Class discussion, prompted with teacher questions

**Materials**

- Projector screen/Smart Board to view video
- Computer/connection to internet
- Variety of plastic water bottles (at least 6 or 7 different brands)
- Of the water bottles, two of them should be new, with water in them for the taste test
- Brita filter water jug for taste test
- Chart paper and markers

**Resources**

- Storyofstuff.org/bottledwater
- Cafe Ecoscience PD workshop
- Pictures:
## Accommodations

- If a student is visually impaired, they will have to rely on their peers to explain the appearance of the water bottle and its information; they can sit near the front of the class for the video and instruction to maximize hearing instructions; audio record discussion if student would like to listen again at home

## Considerations

- Need to be in a classroom with appropriate technology to view video
- If there are too few volunteers for the taste test, there may be extra time at the end
- If there are too many volunteers, they can do the taste test should there be any remaining time left over

### Stage 3: Learning experience and instruction

#### Motivational Hook (10 MINS):

- Allow students time to settle in their seats, and get organized; take attendance (4 minutes)
- Show images of water and ask which one looks most appealing to drink (1 minute)
- Ask for three volunteers to participate in a blindfolded taste test
- Each of the volunteers will taste four types of water – two varieties of bottled water (mineral water and distilled water, for instance), Brita filtered water, and tap water; these students will tell the class which tastes best (5 minutes)

#### Open (20 MINS):

- Show “The Story of Bottled Water” video (10 minutes)
- Think: ask students to think about why they and others drink bottled water (2 minutes)
- Pair: have students discuss and write down some ideas with the person sitting next to them (5 minutes)
- Share: call on pairs to share one point with the class (3 minutes)

#### Body (15 MINS):

- Distribute one water bottle to each table/group of four, a different brand for each group
- In their groups, have students discuss the “appeal” of their water bottle – what pictures, colours, images, words are used to “seduce” customers? (10 min)
- In their groups, have students identify the brand of the water bottle, the manufacturing company, and where the source of the water is (5 min)
- Students should record their findings and ideas on chart paper

#### Close (15 MINS):

- Students present their information to the class, using their charts for display (10 min)
- Explain homework task and write it on the board – write down THREE reasons why water is important to you, FIVE personal uses of water you use on a daily basis, and THREE ways you could use less water; also think about whether or not you thought the video was useful/informative/engaging/effective (5 min)

### Link to Future Lessons

- The students will work towards designing and creating a water filtration system that can make unclean water clean
- In the next science class, students will use water-testing kits and equipment to compare properties of water from different sources – tap water, bottled water, river water, and rain water
- The students will also be asked to complete a media literacy component as a culminating task for the unit – creating an informational video, poster, brochure, performance, etc., that encourages water sustainability

### Assessment

- Formative assessment will be noted during presentations, based on the students’ ability to find the right information
- Formative assessment of collaboration as a learning skill will be monitored during pair and group work by circulating to various groups of students
**Extensions**

- If students finish early, they are welcome to participate in the water taste test. Alternatively, there will be water literature in the classroom for students to look at or read – articles on the Bolivia Water Crisis, the book Ryan and Jimmy (about Ryan’s well), and other related materials.
- Students can brainstorm or research communities or reasons where and why bottled water may be necessary.

**Reflection**

- Was all the material covered?
- Is there anything I need to revisit in the next lesson?
- What went well?
- What didn’t go well?
- Where can I improve?

**Resource Photos:**