Focus on Animation
Unit Guide for the Theme
Our Living Earth

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Overall Objective

Students will a) use their senses to explore, appreciate and learn about the natural world and b) use their newfound understanding to create an awareness program in their school or community.

Grade Level

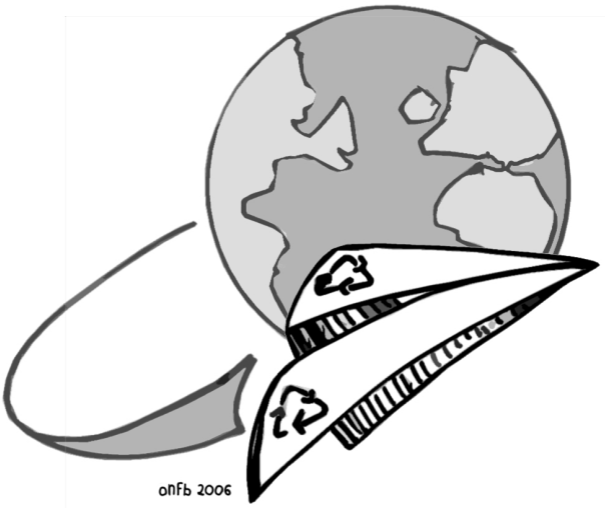
Ages 9 to 12

Content Areas

Language Arts
Science
Citizenship
Math

Films used in this Unit

Wind (9 min 23 s)
Dinner for Two (7 min 15 s)
When the Dust Settles (7 min 11 s)
Air! (2 min 3 s)



NB: The films can be viewed online free of charge at www.nfb.ca/focusonanimation in the My Film Class section.

Materials

Graph paper, large poster board, calculators (optional), newsprint, student art materials and photocopies of some of the material found in the appendix.

Summary

After watching *The Wind,* students take a nature walk to heighten their awareness of the natural world. After the second film, students take inventory of their household consumption to think more about resources and conservation. After viewing the last two films, students think about the impact of human life on the planet and launch an awareness campaign in their school.

Introduction Activity (about 30 min)

- Draw up a list of everyday items and either hand out photocopies to each student or project the list on a screen. The items should be a mix of natural and manufactured materials.
- Go over the list as a class, pointing out that some objects come from natural materials and others are from synthetic, or manufactured, materials. *Some items could be made of wood, cotton, plants or animal products. Others could be made of plastic or polyester. Some items began as natural elements and have been transformed into their present form, e.g., glass, wool, or metal jewellery. Other items are a blend of natural and synthetic materials.*

- In groups of 2-3, have student put the items in the different categories.
- Sort the list as a class, having discussions when necessary. New items may be added to the lists if you wish.

Activity 1: Do You See What I See? (2 x 45 min)

A. Film: *The Wind*

Step 1: Tell students they will watch a short film with no words, on nature. Explain that because there is no talking, the images have more importance. Hand out plain white paper to each student. Instruct the students to record as many images as possible during the film. Sometimes they move quickly, so it will be difficult to record them all. Students will be sketching, not writing. Some words or phrases may be used to clarify images, but no sentences are to be used.

Step 2: Have students compare their notes in pairs. Then ask for some volunteers to share their observations with the class. Include in the discussion:

- What emotions did you notice about the boy?
- How does he feel about the wind?
- What did the other images in the film tell you?
- How did the sound in the film affect your experience?
- What do you think about the art technique used?

Discuss the note-taking method and how it influenced what they chose to record. Explain that these kinds of notes are called "field notes."

B. Nature walk

Step 1: The aim of the nature walk is to experience the world as completely as the boy in *The Wind*. Each person needs 2 sheets of paper or one sheet divided into 2 columns: Natural Elements and Manufactured. Encourage the students to use as much detail as possible, using words only when necessary. Drawing skill is less important than attention to detail. When you're outside, guide students in their observations and note-taking.

Step 2: Back in class, have students look at each others' work. Then hold a discussion:

- What natural elements did you see? What condition were they in?
- What manufactured elements did you see? What condition were they in?
- What did you think about when you were walking?
- Did you see anything unusual or unexpected?
- What words, if any, did you write down?
- Do you feel differently about nature now?

Create a display of students' field notes.

Activity 2: You Can't Always Get What You Want! (2 x 45 min)

A. Film: *Dinner for Two*

Step 1: Allow the class a few moments to look at the display of field notes. Ask about their drawings of nature. Make sure students understand that some of our natural resources are polluted or destroyed.

Step 2: Introduce the film *Dinner for Two*. It is about animals fighting for the same food supply. After showing the film, have a discussion:

- What is the problem presented? (*not enough food for all the animals*)

- What are some reasons why the animals have to compete for the same food? (*overpopulation, fewer bugs due to environmental factors, animal habitats compromised to urbanization, etc.*)
- How do they solve the problem? (*sharing*)
- Can you think of a similar problem in the human world? (*world hunger, housing shortages, poverty, environmental damage, etc.*)
- Which groups of people could each animal represent? (*rich, poor*)
- What types of resources do people compete for? (*food, water, energy)*
- What are some possible ways to solve or help this problem? (*reduce consumption, share resources, get help from government, etc.*)

Step 3: Distribute copies of the Household Consumption Survey found in the appendix. Assign it for homework, making sure the due date gives ample time for families to collaborate. The teacher should also fill out the survey.

B. Graphing

Step 1: Students bring their completed surveys to class. In small groups have them compare their findings.

Step 2: Using your own survey results, show how to make a simple bar graph with the information. Choose one category from the survey, e.g., Food. Place the units used on the vertical plane (ex.: $ per week). Place your name along the horizontal plane (ex.: Mrs. Jones). Colour in the units represented by the total consumption (ex.: $160 = 16 units). In their groups, have students produce a bar graph on one category, using one bar for each student's data. Each student's bar should be a different colour. *If time permits, a class bar graph can be made.*

Step 3: Discuss the data:

- Were the actual amounts more or less than you estimated?
- Do you use more or less than the other households in the class?
- What might be some factors to explain differences in household consumption?
- Do you think your family wastes resources?

Step 4: Present the *Hydro Guide* sheet found in the appendix. In groups, ask students to decide whether we are using our resources responsibly. Brainstorm ways to reduce over-consumption at home. Post the ideas in the classroom.

Activity 3: Whose Planet Is It? (75 min)
Films: *When the Dust Settles* and *Air!*

Step 1: Either divide the class into 2 groups, each watching a different film, or show both films to the class. In this case, have students write the title of each film on 2 sheets of paper.
The task: take notes, alone or with a partner, using the following questions (handed out or posted):

- What images are in the film?
- What sounds are in the film?
- What is the main problem?
- Who are the victims of the problem?
- Who caused the problem?
- Does the problem get solved? How?

- Could this problem happen to you? Explain.
- How would you solve the problem?

Step 2: Have the class share their observations about the 2 films. Show them again if you wish. Consider how ***human actions*** may have influenced the situations in each film. Students can write their ideas on the Venn diagram found in the appendix.

Step 3: Assign a brief personal response to 1 or both films. Students can use their notes, ideas raised in discussions and the Venn diagram.

Closure (preparation of project - 2 hours)

Students will design posters or pamphlets to display or distribute throughout the school, as part of an environmental awareness campaign.

Step 1: Brainstorm ideas, facts and topics covered during the unit. Elicit suggestions for an environmental awareness campaign. Provide examples of good posters and pamphlets if possible.

Step 2: Divide the class into groups (some students may work alone). Assign various topics, according to interest. David Suzuki's Web site for kids has many suggestions for environmental actions. Provide class time to design and produce an awareness campaign, including visuals and brief oral explanations.

Step 3: Talk about the best way to distribute the pamphlets or posters.

Assess Understanding
To assess learning, hold a discussion about the effectiveness of their campaign.

Evaluation
Teachers are encouraged to select their own methods of evaluating students over the course of this thematic unit. However, an evaluation package has been included for the unit closure activity. A student self-evaluation form and an evaluation rubric (to be completed by you) are in the appendix.

Web Resources
Statistics Canada: http://www.statcan.ca/start.html
Natural Resources Canada for Kids: http://www.nrcan-rncan.gc.ca/kids/index_e.html
Jane Goodall Institute: http://www.rootsandshoots.org/
David Suzuki's Nature Challenge for Kids: http://www.davidsuzuki.org/kids/challenges/
2005 M.E.Q. exam resources (Cycle 3):
http://www.justinvision.com/main/
http://www.treemusketeers.org/index.asp
http://www.kidsface.org/pages/onlinenewsletter/home.html

Other Resources
Hydro Québec*: Appliance Consumption Chart*
www.hydroquebec.com/residential/energywise/calcul_consom.html
Environment Canada: *Water Log Sheet*
www.ec.gc.ca/water/images/info/pubs/brochure/e_log.htm

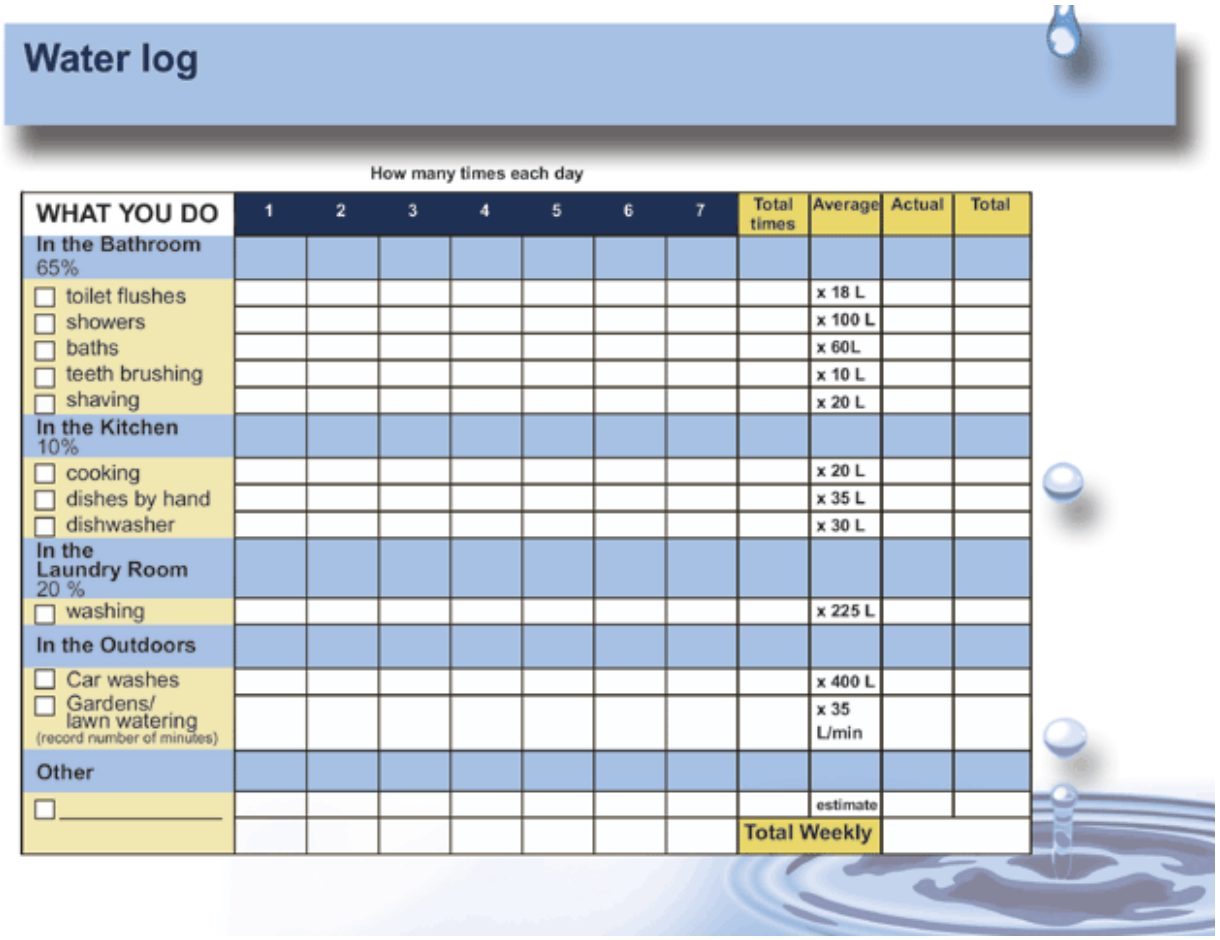
Name: _____ **Date:** _____

Household Consumption Survey

1. Fill in your estimate or best guess in the Estimate column.
2. Get help from your parents to fill in the Actual Amount column.

	ESTIMATE	ACTUAL TOTAL
WATER		
How many baths or showers are taken each day?		
How many times does the toilet get flushed each day?		
How many times are the dishes washed each day? How many loads of laundry are washed each day?		
ELECTRICITY		
How many hours a day is the TV on?		
How many hours a day are the lights on?		
How many hours a day is your house heated by electricity?		
How many times is the dryer run each day? **GAS**		
How many hours a day is your house heated by gas or oil?		
How many times per week does your household fill up the gas tank in the car?		
FOOD		
How much money does your household spend on groceries each week?		
How many times per week do members of your household eat in restaurants or get takeout?		
WASTE		
How many times per week does your household recycle?		
How many bags of trash does your household put out each week?		

Water Log Sheet – for reference only



Water log

How many times each day

WHAT YOU DO	1	2	3	4	5	6	7	Total times	Average	Actual	Total
In the Bathroom 65%											
☐ toilet flushes									x 18 L		
☐ showers									x 100 L		
☐ baths									x 60L		
☐ teeth brushing									x 10 L		
☐ shaving									x 20 L		
In the Kitchen 10%											
☐ cooking									x 20 L		
☐ dishes by hand									x 35 L		
☐ dishwasher									x 30 L		
In the Laundry Room 20 %											
☐ washing									x 225 L		
In the Outdoors											
☐ Car washes									x 400 L		
☐ Gardens/ lawn watering (record number of minutes)									x 35 L/min		
Other											
☐ _____									estimate		
								Total Weekly			

Source: Environment Canada Freshwater Website, www.ec.gc.ca/water/images/info/pubs/brochure/e_log.htm

Hydro Guide – for reference only

Appliance consumption chart

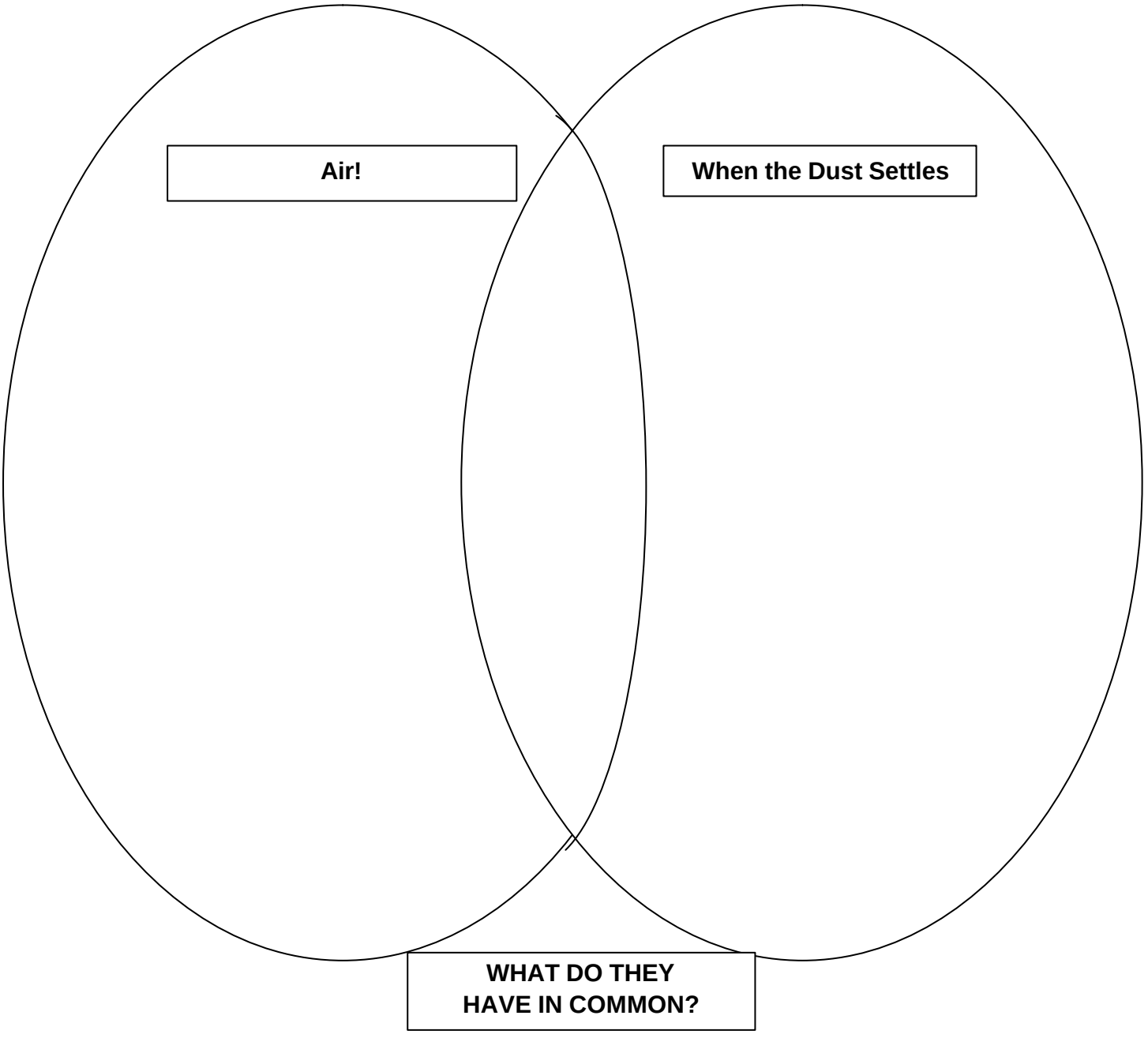
- All consumption figures shown are averages, and are for information purposes only.
- Costs are based on the domestic electricity rate in effect in Québec since April 1, 2006, which is $0.0693 per kilowatthour, taxes included.

Type	Consumption (Wh)	Daily Cost ($)	Remarks
Hot water (200 litres per day)			
Water heater – 60-galon tank	15,100	1.05	Temperature - Hot water: 60 °C - Cold water: 7 °C
Water heater – 40-galon tank	14,600	1.01	Temperature - Hot water: 60 °C - Cold water: 7 °C
Used-based consumption			
Bath	3,600	0.25	Volume or water: 100 litres Temperature - Hot water: 60 °C - Cold water: 7 °C
Shower	2,400	0.17	Duration: 7 min Flow: 9.5 litres/min Temperature - Hot water: 60 °C - Cold water: 7 °C
Washing machine – Hot water	5,640	0.39	Normal cycle Full load
Washing machine – Warm water	2,590	0.18	Normal cycle Full load
Washing machine – Cold water	240	0.02	Normal cycle Full load
Dishwaher – Regular drying cycle	3,550	0.25	Normal cycle
Dishwaher – Natural drying	3,240	0.22	Normal cycle
Clothes dryer – Normal cycle	2,390	0.17	Duration : 52 min

Source: Hydro Québec
www.hydroquebec.com/residential/energywise/calcul_consom.html

Name: _____ **Date:** _____

What human actions caused the situations in each film?



Our Living Earth
Evaluation Rubric

Name: _____ Date: _____

Criteria	Level 1	Level 2	Level 3	Level 4
Content Area: **Content of pamphlet or newsletter**	Student demonstrates a high level of environmental awareness. Student communicates message effectively, **always** using the proper environmental language.	Student demonstrates a satisfactory level of environmental awareness. Student communicates message effectively, **usually** using the proper environmental language.	Student begins to demonstrate a sense of environmental awareness. Student attempts to communicate message, **sometimes** using the proper environmental language.	Student does not demonstrate a sense of environmental awareness. Student attempts to communicate message, **rarely** using the proper environmental language.
Content Area: **Layout of Pamphlet or Newsletter**	Layout of pamphlet or poster is clearly organized and extremely pleasing. Includes all required elements and more. Contains many strong images.	Layout of pamphlet or poster is organized and aesthetically pleasing. Included all required elements. Contains images that contribute to the meaning of the pamphlet or poster.	Layout of pamphlet or poster is somewhat organized and sometimes difficult to understand. Includes most of the required elements; few images that contribute to the meaning of the pamphlet or poster	Layout of pamphlet or poster is very disorganized and often difficult to understand. Includes only some of the required elements; has included few or no images that contribute to the meaning of the pamphlet or poster
Cross Curricular: **Student's use of creativity**	Student considered all elements of task independently and proceeded in a highly dynamic fashion. Pamphlet or poster is extremely original and effective.	Student considered all elements of task and proceeded in a productive fashion. Pamphlet or poster is original and effective.	Student considered most elements of task and proceeded with some guidance. Pamphlet or poster is **complete** and demonstrates effort.	Student considered some elements of task and proceeded with much guidance. Pamphlet or poster is **incomplete** and demonstrates a lack of effort.
Cross Curricular: **Student's Oral Presentation of Pamphlet or Poster**	Student speaks confidently, holds attention by making eye contact, and refers expertly to pamphlet or poster. Displays great enthusiasm and commitment to topic.	Student speaks clearly, consistently makes eye contact, and refers competently to pamphlet or poster. Displays enthusiasm and knowledge of topic.	Student speaks with some difficulty, makes occasional but un-sustained eye contact, and often reads directly from pamphlet or poster. Student displays some interest in topic.	Student speaks with great difficulty, makes no effort to make eye contact and reads directly from pamphlet or poster. Uninformed and apathetic towards topic

Name: _____ **Date:** _____

Our Living Earth: Self-Evaluation

What did I learn during this unit?

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_____

How did I learn this?

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What did I enjoy learning about most? Why?

_____

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_____

How will I use my new knowledge and skills in the future?

_____

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