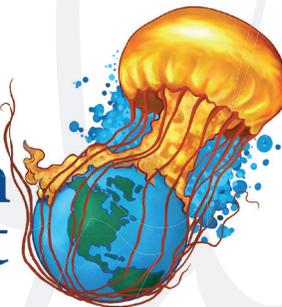


# The Jellyfish Action Project

The  
Jellyfish  
Project



A new wave of environmental education for today's youth.

**The Jellyfish Action Project** is an experiential environmental learning initiative that educates youth about environmental stewardship, energy and water conservation, waste reduction, responsible consumerism and environmental toxins through student-led environmental assessments and group research projects.

# The Jellyfish Action Project



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## Introduction To The Jellyfish Action Project

**The Jellyfish Action Project (JFAP)** is a dynamic environmental education tool that fits with British Columbia's new curriculum design for middle and high school students. When teachers use the JFAP, they educate students about environmental stewardship, energy conservation, water conservation, waste reduction, responsible consumerism, and home toxicity assessments. Through the JFAP, students will better understand the environmental footprint of their homes by conducting home eco-audits and analyzing the results. Students will then share their findings with their classmates, teachers, schools and broader communities to encourage greater environmental stewardship and a sustainable future.

The JFAP begins with students assessing their home environments through an eco-audit. The eco-audit is followed by a home survey conducted by the students with their guardian(s). After the survey, a follow-up eco-audit is conducted to determine if any sustainable changes have occurred in the home. Each student completes a report based on his/her individual home titled the Individual Household Report. Students and teachers will then work together to compile the findings into one collective report, titled the Collective Home Eco-Audits Report, then hopefully students will share their findings with their friends, families, schools and greater community to encourage others to take environmentally-friendly action towards healthier, more sustainable homes.

The Jellyfish Action Project engages students in the learning process from start to finish, thus it is a project that students can take pride in.

### **The benefits of the JFAP for Schools/Teachers are that it:**

- Satisfies prescribed learning outcomes and curriculum requirements.
- Provides inquiry-based, experiential learning.
- Offers a flexible yet innovative learning model.
- Promotes authentic youth engagement and community outreach by focusing on student-led learning that take place outside of the classroom and in the students' homes.
- Stimulates environmental stewardship in students by providing them with the tools to make responsible choices for long-term, tangible improvements in their homes.

### **Strengths of the JFAP Design:**

- Can be broken down into one day, one week or six week version of the curriculum.
- Stimulates problem-solving, critical reflection, analytical and public speaking skills.
- May be taught with and without a computer.
- Provides a template for energy efficiency and contributes to sustainability practices.
- Draws on the One Tonne Challenge and the Rights of the Child to a healthy environment.
- Appropriate for grades 6-12.
- Connects to various subjects including: science, health, social studies, environmental studies, language, personal planning, geography, and mathematics.
- Touches on important issues such as: energy and water conservation, waste reduction, responsible consumerism, home toxicity assessments, transportation, sustainable development, recycling, and community outreach.

**Stimulates problem-solving, critical reflection, analytical and public speaking skills.**

## Key Curriculum Components

1. Data collection in the form of 2 eco-audits and 1 survey
2. Data analysis: Individual sustainability report and a collective classroom report

### **1 | Home Eco-Audits and Private Home Survey**

Each student performs two environmental audits of their home. One eco-audit is conducted before the home survey to establish a baseline. Afterwards a survey is conducted by the student with their guardians. Once the survey is complete, another eco-audit occurs to determine if any changes have occurred within the household. Results of each of the audits are easily calculated based on the difference between the two audits.

### **2 | Reports: Individual Household and Collective Home Eco-Audits**

Through this project, students complete two reports based on their eco-audit findings. The first report is called the Individual Household Report and is based on each student's home assessment. The second report, referred to as the Collective Home Eco-Audits Report collects all of the students' individual reports and compiles the information so it can be shared with the class, school, guardians, and boarder community if desired. Through these reports teachers and guardians will see how the students are contributing to building sustainable futures in their homes and communities. Students may also wish to share their best sustainability practices and advice for energy/financial savings with their families, friends and communities.

### **Outline: Full Six Weeks**

- 1 | **Home Eco-Audit #1**
- 2 | **Private Home Survey**
- 3 | **Home Eco-Audit #2**
- 4 | **Individual Household Report**
- 5 | **Collective Home Eco-Audits Report**
- 6 | **Distribution to school and community**

This resource has been made possible through the co-operative efforts of The Jellyfish Project Society, BC School District (#46), British Columbia Teachers Foundation, EEPSA, Suzuki Elders program, Youth Environmental Stewardship of BC (YESBC), WildBC and more.

### **For additional support:**

Please contact The Jellyfish Project Society via email at [info@thejellyfishproject.org](mailto:info@thejellyfishproject.org) with the subject line: The Jellyfish Action Project (JFAP) or visit: [www.thejellyfishproject.org/learn](http://www.thejellyfishproject.org/learn)

*“Are we content with the status quo? Or do we desire something better?”*

– Joanna Larson, President: Prince Rupert Teachers’ Association (2013)

## The Jellyfish Action Project

### Teacher’s Guide

The Jellyfish Action Project (JFAP) is designed for students in grades 6 – 12 and can be applied in the following ways:

**1 Day** | lesson plan based on our **Home Eco-Audits**

**1 Week** | lesson plan that provides a more comprehensive version of the one day plan

**3 Week** | lesson plan based on the **Home Eco-Audits** and **Private Home Survey**

**6 Week** | three week lesson plan with community outreach component

#### Potential Learning Objectives

Students will be able to:

- Use this resource to understand how conditions in our homes affect environmental health.
- Appreciate responsible consumerism; energy use; household toxicity prevention; water conservation, and waste reduction.
- Develop problem-solving, critical thinking, energy management and sustainable living skills.
- Identify ways in which they are connected to the environment.
- Learn how to take actions that reduce global warming and increase sustainable practices.

**Learn how to take actions that reduce global warming and increase sustainable practices.**

#### TEACHING PROCESS

**Prior to Beginning** | One Week Before

Introduce students to the concept of an audit and how to use them to make their homes and communities more environmentally-friendly. Send a hard-copy of the **Letter To Guardians** (found on page 4) and a **Consent Form** (found on page 5) home with each student. Ensure that guardians sign the form and that it is returned by the students prior to starting the project.

As this project focuses on several topics, familiarize students with the ideas of:

1. Environmental Stewardship
2. Sustainability
3. Climate Change
4. Household Toxins

Class discussions, videos or research can be used to enhance students’ understandings.

Possible videos to spark conversation include:

#### Environmental Stewardship

- The Jellyfish Project Promo Video  
[www.thejellyfishproject.org/promotional-video](http://www.thejellyfishproject.org/promotional-video)
- How Behavioural Science Can Lower Your Energy Bill  
[www.ted.com/talks/alex\\_laskey\\_how\\_behavioral\\_science\\_can\\_lower\\_your\\_energy\\_bill.html](http://www.ted.com/talks/alex_laskey_how_behavioral_science_can_lower_your_energy_bill.html)
- Down the Drain and Back Again  
[www.youtube.com/watch?v=\\_0uXDTmf6dQ](http://www.youtube.com/watch?v=_0uXDTmf6dQ) |

#### Household Toxins

- Toxic Chemicals Lobby: Exclusive Leaked Footage  
[www.youtube.com/watch?v=\\_q75F\\_hjg7o](http://www.youtube.com/watch?v=_q75F_hjg7o)
- Interview with Mark Schapiro: The Toxic Chemistry of Everyday Products  
[www.youtube.com/watch?v=U\\_tlbQu2RJ8](http://www.youtube.com/watch?v=U_tlbQu2RJ8)

## INTRODUCTORY LETTER TO GUARDIANS

Date

Dear Guardian,

**Re: Jellyfish Action Project (JFAP)**

This letter is to inform you of a new educational tool that our class will be using this term, titled the Jellyfish Action Project.

As of next week, students will be asked to do 2-3 hours of homework per week using this tool and we need your help! Students will be auditing their home and conducting a survey. The survey will ask about your home's products, appliances, energy conservation, waste output and water usage. Responses to the survey questions will be kept private and require a simple yes/no/sometimes for each answer.

Auditing your home in this way will allow your child to observe the relationship between their indoor environment and the outside environment. The home audits are meant to be a fun, hands-on learning experience that encourages students to reduce their energy use.

Please ensure that your child has your support in this project by being available for mid-week discussions about some of the audit or survey questions. If you have any questions or suggestions about this project please contact me.

Thank you,

Teacher's Name and Signature

**GENERAL PARTICIPATION PARENT/GUARDIAN CONSENT FORM**

I, \_\_\_\_\_, give permission for \_\_\_\_\_  
Print Parent's/Guardian's Full Name Print Student's Full Name  
to participate in the Jellyfish Action Project that is planned for \_\_\_\_\_.  
Print Name of School

I understand that the Letter to Guardians has been sent to explain the nature of the **Jellyfish Action Project** (JFAP) which includes two home audits, a survey, and two reports based on the results of the audits/survey with some assistance from myself. The above mentioned student will privately apply the Jellyfish Action Project to our home, and will contribute his/her results to the class's cumulative total. The final report is destined to be shared with the school and community, but individual results will remain confidential.

YES  NO

I also give my permission for photographs of the above-mentioned student to be taken and displayed in the class's Collective Home Eco-Audits Report and may be publicly distributed.

YES  NO

Parent's/Guardian's signature \_\_\_\_\_ Signature Date \_\_\_\_\_

Parent/Guardian Phone Number | HOME \_\_\_\_\_ WORK \_\_\_\_\_

PROCEDURE WEEK ONE

Obtain signed Consent Forms from guardians.

WEEK ONE OF SIX

Discussion and Home Eco-Audit #1

Connect students to the Jellyfish Action Project (JFAP). Weekly schedule: Introduce new material on Monday, have students conduct independent work Monday - Thursday, and then review as a class on Friday.

Lead with discussions on relevant subject matter to the JFAP, such as climate change, sustainability, environmental stewardship, energy conservation, water conservation, waste reduction or home toxins.

Possible Discussion Questions:

- Do you think that children and youth have rights? Why or why not? (i.e. The Rights of the Child to a healthy environment with clean air and fresh water.
- If so, what do you think are the most important rights?
- What is climate change?
- What factors contribute to climate change?
- Are there ways that humans can help reduce or slow down climate change and global warming?
- What factors influence healthy oceans?
- What effect, if any, does climate change have on ocean health?
- Does it matter if climate change is human-made or a product of natural change?
- What does the term sustainability mean?
- What does it mean to conserve energy?
- What does it mean to you to be a responsible consumer?
- Have you heard of the term home toxins before?
- Have you considered the chemicals in different household items/products that might be toxic? Why or why not?
- How can we waste less water?
- Do you see yourself as part of the solution? Why or why not?

1| Introduce the Home Eco-Audit #1

Introduce the Home Eco-Audit as a tool to better understand how home environmental health is connected to ecosystems' environmental health and how practices to reduce energy and water consumption, reduce waste and home toxins are beneficial to humans and the planet. Explain that the audit collects information about students' homes and this information will be used for two reports. The two reports are the Individual Household Report and the Collective Home Eco-Audits Report. Information for the Individual Household Report will be kept private. The second report, the Collective Home Eco-Audits Report will aggregate the results of the students' individual reports. Students can follow the Report Template found in the appendix of this document to complete both reports.

2| Students Conduct Home Eco-Audit #1

Students complete the four sections (Energy Conservation, Responsible Consumerism, Home Toxicity, and Water Conservation and Waste Reduction) of the Home Eco-Audit #1 at home and review the Tip Sheets for each section with their guardians. For each question that requires a no/sometimes/yes answer, have students enter the numerical value that corresponds with the answer (No = 1, Sometimes = 0.5, Yes =0) in the column marked (Audit #1) on the right-hand side of the table. For questions that have a direct numerical answer, have students put that number in the appropriate box.

3| Post Audit

Host a classroom discussion about the experience and review tip sheets together as a class. Brainstorm together additional ways to conserve energy and water, and reduce waste and toxins in the home.

Do you know how far your food travels to get to your home?

## The Jellyfish Action Project

### Home Eco-Audits

#### ENERGY CONSERVATION

Scoring | No = 1 | Sometimes = .5 | Yes = 0

Quantitative Response = Actual number

AUDIT # 1 FOLLOW-UP  
AUDIT # 2

1   Do you know the difference between incandescent or halogen light bulbs, and LED or compact fluorescent light bulbs?		
2   How many incandescent and halogen light bulbs do you have inside and outside your home and property?		
3   Walk through your home, how many lights are on that do not need to be on?		
4   Estimate how many times you run your dishwasher each day.		
5   What is the temperature setting (typically 1 – 6) found inside your fridge?		
6   What is the temperature of the home’s thermostat regulator?		
7   Do you know how far your food travels to get to your home? Yes   No   Sometimes		
8   How many non*ENERGY STAR or Power Smart appliances (stove, dishwasher, washing machine, etc.) do you have in your home?		
9   Estimate the number of times per week the washing machine was run without a full load.		
10   Estimate the number of times per week the washing machine was run with hot/warm water.		
11   Does your family use public transportation? Yes   No   Sometimes		
12   Do you know you can follow your energy use, even to receive email alerts, etc? Yes   No <a href="http://www.bchydro.com/accounts-billing/customer-service-residential-rates.html">www.bchydro.com/accounts-billing/customer-service-residential-rates.html</a>		
13   Did you know there was a connection between saving water and saving energy? Yes   No		
<b>TOTAL</b>		

## TIPS FOR ENERGY CONSERVATION

**Consider** using fluorescent light bulbs as they use 75% less energy than incandescent lamps for the same amount of life and they last up to eight times longer.<sup>1</sup> LED light bulbs are best at saving heat, energy and money in the long run.<sup>2</sup>

**Consider** that many things that are plugged in, although they may be turned “off”, still use electricity and draw energy. It is important to turn off lights when you are not using them.<sup>3,4</sup> Look to see whether any devices or appliances such as a microwave or coffee maker are on. Unplugging devices and appliances (TV/Audio Centre, fan, heater, DVD player, laptop, printer, etc.) from the wall when you are not using them helps save energy and money. Use an extension bar with multiple plugs for the convenience of having only one switch to turn off.

**Reducing** the amount of time you run your dishwasher, especially the drying cycle will save energy and money.<sup>5</sup>

**Keeping** your refrigerator between 1 - 4 degrees Celcius is beneficial as it saves both energy and money.<sup>6</sup> **Consider** opening the refrigerator door for as little time as possible, knowing what you want before opening it.<sup>7</sup> **Consider** not putting hot items in the refrigerator as it wastes energy.<sup>8</sup> An Energy Star\* refrigerator is at least 10% more efficient than the minimum government efficiency standards.<sup>9</sup>

**Consider** keeping your freezer full even if it is full of frozen water. Full freezers use less energy than half empty ones.<sup>10</sup>

**Consider** using a lid on pots and pans in order to capture the heat as efficiently as possible.<sup>11</sup>

**Reducing** your home’s temperature by even three degrees will reduce your home energy bill by 10%. Twenty percent of your home’s heating and air conditioning costs are from the use of these appliances while you are not even home. Keep warm by putting on a sweater. A programmable thermostat will help save energy.<sup>7</sup> Regular maintenance of heating and cooling equipment will also help you save.<sup>11</sup>

**Consider** a diet that is sourced from within 100 miles as ideal to minimize transportation costs and maximize freshness.<sup>12</sup>

**Use** cold water to wash your clothes, it is no longer necessary to wash your clothes in hot/warm water reducing energy use and saving money. Additionally, air drying your clothes keeps clothes in better condition and at zero cost.<sup>13, 14</sup>

**Consider** taking public transit instead of a car, this saves both money and energy.<sup>15</sup>

**Consider** keeping your family car tuned up, wheels aligned and properly inflated. This maintenance practice reduces gas consumption, transportation costs, and reduces CO<sub>2</sub> emissions.<sup>16</sup>

**Check** windows and doors to make sure they are sealed properly. If they are not, consider asking your guardians to buy some weather stripping that can fill in cracks as heat can escape through loose windows and door seals.<sup>17</sup>

*What other tips can you think of to conserve energy in your home?*

Does your household use a shopping list to grocery shop?

**RESPONSIBLE CONSUMERISM**

Scoring | No = 1 | Sometimes = .5 | Yes = 0

Quantitative Response = Actual number

AUDIT # 1 FOLLOW-UP  
AUDIT # 2

1   Go into your fridge and take a look at your seafood. Is it sustainable? Yes   No If there is no seafood in your fridge, ask your guardians if the seafood they usually buy is sustainable? Yes   No		
2   On average, how many days per week does your family eat meat?		
3   Does your household use a shopping list to grocery shop? Yes   No   Sometimes		
4   Do you look at "best by" dates on food items and use food in date order? Yes   No   Sometimes		
5   Do you know that different fish have more DDT, lead, or mercury in them? <sup>18</sup> Yes   No   Sometimes		
6   Do you buy Styrofoam, or PVC (polycarbonate) plastic cups, plates or cutlery, products often associated with BPA and phthalates? <sup>19</sup> Yes   No		
<b>TOTAL</b>		

## What tips can you think of to conserve energy in your home?

### TIPS FOR RESPONSIBLE CONSUMERISM

**Consider** buying only sustainable seafood.<sup>22</sup>

Use Ocean-Wise Apps or websites to check the sustainability of your seafood choices.

[www.oceanwise.ca/news/ocean-wise-iphone-app](http://www.oceanwise.ca/news/ocean-wise-iphone-app)  
[www.oceanwise.ca/about/sustainable-seafood](http://www.oceanwise.ca/about/sustainable-seafood)  
[www.vanaqua.org/act/direct-action/ocean-wise](http://www.vanaqua.org/act/direct-action/ocean-wise)  
[www.seachoice.org/search](http://www.seachoice.org/search)  
[www.davidsuzuki.org/publications/downloads/2011/Top-10-Sustainable-Seafood.pdf](http://www.davidsuzuki.org/publications/downloads/2011/Top-10-Sustainable-Seafood.pdf)

If you are going shopping for seafood, take a sustainable pocket guide with you.

[www.montereybayaquarium.org/cr/cr\\_seafoodwatch/content/media/MBA\\_seafoodwatch\\_westcoastguide.pdf](http://www.montereybayaquarium.org/cr/cr_seafoodwatch/content/media/MBA_seafoodwatch_westcoastguide.pdf)  
[www.seachoice.org/wp-content/uploads/2012/04/SC\\_card\\_2012\\_5panel\\_web.pdf](http://www.seachoice.org/wp-content/uploads/2012/04/SC_card_2012_5panel_web.pdf)

One of the top things that you can do to help global warming or “climate change” is to reduce your meat consumption as 18 percent of greenhouse gas emissions come from meat and dairy products.

[www.davidsuzuki.org/what-you-can-do/top-10-ways-you-can-stop-climate-change/](http://www.davidsuzuki.org/what-you-can-do/top-10-ways-you-can-stop-climate-change/)

Lists save time, keep you on track and reduce the impulse for buying unnecessary foods.

**Consider** buying from local food suppliers and farmers.

Most of the food we eat comes from far away and subsequently impacts the depth of our environmental or ecological footprint due to the harmful effects of CO<sub>2</sub> emissions. Did you know that the average fruit or vegetable travels more than 1,500 miles before it gets to your kitchen table?<sup>20</sup>

Transportation causes approximately 35% of greenhouse gas emissions. Walk, bicycle or take transit whenever you can, and buy locally.

There are apps, such as “Boycott”, which offers insights into which products are produced by multinational corporations that can lead to greater transportation costs, CO<sub>2</sub> emissions, increased global warming and fewer local jobs.

**Consider** not drinking liquids from straws, plastic cups or beverage containers (pop bottles).<sup>21</sup>

**Consider** using recycled or unbleached toilet paper.<sup>22</sup>

**Consider** making your own lunch rather than buying them pre-packaged. More packaging means more garbage, and therefore more plastics accumulating in our oceans - and you can help by using reusable containers instead.<sup>23</sup>

**Consider** not buying food in plastic or Styrofoam containers as these containers cannot be recycled and take many years to break down, thus filling up our landfills.<sup>24</sup>

*What other tips can you think of to help you become a more responsible consumer?*

## Do you wash your fruits and vegetables before eating them?

### HOME TOXICITY

Scoring | No = 1 | Sometimes = .5 | Yes = 0

AUDIT # 1    FOLLOW-UP  
AUDIT # 2

1   Do you read labels of household and yard chemicals and dispose of them properly? Yes   No   Sometimes		
2   Do you store home pesticides, prescription medications and solvents in a locked cabinet or child-proof container? Yes   No		
3   Do you wash your fruits and vegetables before eating them? Yes   No   Sometimes		
4   Estimate the number of times per week you heat or cook with plastics. <sup>25</sup>		
5   Estimate the number of times per week that you cook with a non-stick (Teflon) coated pan or eat from take out containers?		
6   Estimate how many disposable plastic water bottles your family drinks per week.		
7   Is it best to have <i>no</i> fluoride in your water supply? <sup>26</sup> Yes   No   Sometimes		
8   Is it best to have no fluoride or triclosan in your toothpaste? <sup>27</sup> Yes   No   Sometimes		
9   Identify the number of toxic ingredients found in 1) a deodorant; 2) a shampoo; and 3) a random cosmetic product. <i>Use the what's-inside-shoppers-guide. www.davidsuzuki.org/publications/downloads/2010/whats-inside-shoppers-guide.pdf</i>		
10   Are you reading about the ingredients listed on your personal products that you buy using a What's-inside-shoppers-guide to avoid known toxins and carcinogens? Yes   No   Sometimes		
11   Perfluorinated Chemicals (PFCs) are non-stick stain, water and fire repellent chemicals used in paper food-packaging, shampoo, dental floss, cosmetics, nail polish, facial moisturizers, eye make-up and denture cleaners that are persistent pollutants in the environment and linked to multiple health risks. <sup>33</sup> Estimate the number of times you wash or apply on your face this ingredient that is found on an ingredient list.		
12   Trichloroethylene (TCE), a toxic solvent found in art supply components of paint, inks, glues, and adhesives that gets washed down the drain into the water system. <sup>28</sup> Estimate the number of art activities when you are using this art solvent per week.		
13   Do you know that hazardous chemicals, such as <i>Phthalates and BPA</i> are found in your garden hose? Yes   No		
14   Do you know that the "new car smell" is actually off-gassing of hazardous chemicals? Yes   No		
15   Do you know what materials kid's toys are made of? <sup>29</sup> Yes   No		
16   Do you know the materials that Halloween make-up are made of? <sup>29</sup> Yes   No		
TOTAL		

## What tips can you think of to reduce toxins present in your home?

### TIPS FOR HOME TOXICITY REDUCTION

**Washing** off pesticide and herbicide residues is necessary to minimize micro-toxin and bacteria exposure.<sup>30,31</sup>

**Avoid** heating plastics, as they can release toxins like BPA - Bisphenol A that is linked to cancer. Plastic and some take away food containers have toxic non-stick coating<sup>29</sup>. Try to avoid perflurinated chemicals (PFOs - PFOA, PROS, PTFE) where possible. Make note of the number on any plastic container or cookware and try to avoid plastics marked with 3, 6, and 7 inside the recycling icon.<sup>32</sup>

When polycarbonated water bottles are heated-up they may release plastic toxins (i.e. BPA). Plastic water bottles are also expensive in comparison to free and safer public water supply.<sup>33</sup>

**Consider** making a non-toxic pesticide for your garden using small amounts of soap and water sprayed directly on the plants.<sup>34</sup>

**Consider** entirely avoiding the use of cosmetic pesticides or herbicides; pull weeds instead.<sup>35</sup>

**Consider** presoaking your fruits and vegetables in a diluted vinegar and water solution to help remove pesticides, herbicides and bacteria before eating.

**Consider** keeping a Dirty Dozen Mobile Shopper's Guide and a Safe Shoppers Guide in your wallet. These guides provide a list of ingredients to avoid in your cosmetics, personal care products and home cleansers.

**Non-toxic Sustainable Shoppers Guide:** [www.davidsuzuki.org/publications/downloads/2010/whats-inside-shoppers-guide.pdf](http://www.davidsuzuki.org/publications/downloads/2010/whats-inside-shoppers-guide.pdf)

**Dirty Dozen Mobile Shopper Guide:** <http://davidsuzuki.org/dirty12/>

**Consider** how you can choose non-toxic and unscented products for household use.

*What other tips can you think of to reduce toxins present in your home?*

## Do you know where your waste water goes?

### WATER CONSERVATION AND WASTE REDUCTION

Audit Choice Scoring | No = 1 | Sometimes = .5 | Yes = 0

AUDIT # 1    FOLLOW-UP  
AUDIT # 2

1   Are storm drains, drainage ditches or sidewalks clean of plastics and garbage around your home? Yes   No		
2   Is your family recycling? Yes   No   Sometimes		
3   Is your family composting? Yes   No		
4   How full is your weekly garbage can? (.25) quarter? (.5) half? (.75) three quarters? (1) full?		
5   Do you have a low water flow toilet or water displacement container in your toilet? Yes   No		
6   Estimate how many times per week in your household a shower or bath is taken .		
7   How many minutes does your average shower take?		
8   Estimate how many times per week your washing machine is run without a full load of laundry.		
9   Do you choose not to use plastic to wrap your lunch? Yes   No   Sometimes		
10   Do you use reusable shopping bags? Yes   No   Sometimes		
11   Have you set up a paper recycling bin? Yes   No		
12   Do you know where your water supply source comes from? Yes   No		
13   Do you know where your waste water goes? Yes   No		
<b>TOTAL</b>		

## What tips can you think of to conserve water and reduce waste?

### TIPS FOR WATER CONSERVATION AND WASTE REDUCTION

**Consider** conserving water. The less water you use, the less contaminated runoff and wastewater eventually finds its way back to our lakes and oceans.

**Consider** purchasing a low water flow shower head.

**Consider** what goes down the drain and toilet: household waste, toxins, medications, pesticides, and other chemicals have effects on the environment when they go down your drain.<sup>36</sup>

**Consider** not pouring solvents such as gasoline, oil, or thinner etc. into soil or down drains.<sup>37</sup>

**Consider** using sand instead of salt to reduce the slipping on an ice hazard around your home.

**Consider** avoiding the use of cosmetic pesticides/herbicides, pull weeds instead. These water pollutants enter the water table, streams, rivers and oceans when rain washes it off our lawns.

**Consider** reducing your lawn area. For example, you can plant trees or other vegetation like low-maintenance native plants to offset your carbon footprint.

**Consider** starting a compost pile for leaves and yard debris or take them to a yard debris recycler. *Burning them creates air pollution. Throwing them away wastes landfill space.*

**Consider** using leftover coffee grounds to increase the soil acidity for growing your plants.

**Consider** taking extra plastic and rubber pots back to the nursery for reuse.

**Consider** reducing your plastic use. For example, use brown paper bags for garbage liners rather than plastic garbage bags. Why reduce your plastic use? Well, plastics from land-based sources are the most common form of marine litter worldwide. In addition, plastics comprise up to 90% of all floating marine debris. Plastics do not biodegrade, but instead break down into tiny particles that persist in the ocean, entering the food-chain when consumed by fish, sea birds and other marine life. An estimated 100,000 marine mammals and up to 1 million sea birds die every year after ingesting or being tangled in plastic marine litter. In 2009, nearly 3.8 million tonnes of plastic bags, sacks and wraps were generated in the United States, although less than 10% of it was recycled. A typical North American child generates 67 pounds of discarded school plastic lunch packaging waste per year. This translates into over 18,000 pounds of additional plastic waste per year in the average-sized elementary school.

**Consider** that 67 million water bottles are thrown away each day,<sup>38</sup> try to reduce the number of plastic bottles you buy.

**Consider** not buying food in plastic or Styrofoam containers, choose less packaging.<sup>39</sup> Avoid plastic if possible.

**Consider** reusable packaging or refillable packaging that can be re-used.

**Consider** canceling junk mail and catalogue deliveries.

**Consider** cutting the rings off plastic beverage holders to prevent harm to wildlife.<sup>40</sup>

*What other tips can you think of to conserve water and reduce waste?*

The Home Survey is a source of information and motivation to make your home environment more sustainable.

## PROCEDURE WEEK TWO

### WEEK TWO OF SIX

#### Private Home Survey

- 1 | Direct students to review the **Private Home Survey** (found on page 16). Students who did not complete the first of their two home eco-audits during week one can be given leeway and allowed to finish both this week.
- 2 | Students can take on the role of an interviewer or they can ask their guardian to complete the **Private Home Survey** independently in writing. The survey will take 40-60 minutes to complete. This is a great opportunity for students to practice interviewing skills. Use the following paragraph as an example.

*The purpose of this **Home Survey** is to act as a source of information and as motivation to make your home environment more sustainable by using less energy; wasting less water; creating less waste; consuming sustainably, and saving money.*

- 3 | Discuss the home survey with students.

## PROCEDURE WEEKS THREE AND FOUR

## The Jellyfish Action Project

### Home Survey

**Energy Conservation** | 29 questions

**Responsible Consumerism** | 32 questions

**Home Toxicity** | 40 questions

**Water Conservation and Waste Reduction** | 26 questions

Please answer by marking yes, no, or sometimes

#### ENERGY CONSERVATION QUESTIONS

	YES	NO	SOMETIMES
1   Do you know that your cell phone, or any appliance with a light on, your computer and peripheral printers, back-ups, etc. all use energy, even when not in use?			
2   Do you know you can charge your cell phone immediately upon arriving home and unplug it fully charged before going to bed instead of leaving it plugged-in all night?			
3   Do you know if your fridge and stove are Power Smart?			
4   Do you know that generally your fridge and stove each use up 18% of your home energy?			
5   Will you check to see if your hot water tank is set for 120F/49C to save energy and money?			
6   Do you know some washing machines use 15% of household power?			
7   Do you know you can wash clothes in cold water instead of warm, and air dry instead of tumble dry?			
8   Do you know that always running your dishwasher with a full load can reduce 100 pounds of CO <sub>2</sub> and save up to \$40 per year?			
9   Do you adjust your fridge temperature down to save energy?			
10   When you turn on the electricity at your house, do you think about where it comes from?			
11   Do you know how the electricity in your home is generated: coal, coke, diesel, gasoline, gas, solid waste landfill sites, or geothermal compared to hydro, wind, solar, or nuclear; and which have the least CO <sub>2</sub> emissions?			
12   Do you know you can save money every year by changing air filters, using a programmable thermostat, and regular maintenance to your heating and cooling equipment?			
13   Do you have a programmable thermostat?			
14   Do you change your heating duct or air conditioning filters?			
15   Do you have regular heater and air conditioning maintenance?			
16   Do you know that proper insulation of your home stops drafts and leaks by using caulking, weather stripping, and more insulation in your roof or attic and that plastic over the windows and insulation of pipes to and from the hot water tank can reduce energy costs by up to 20%?			

Do you know that to waste less food means to waste less energy?

ENERGY CONSERVATION QUESTIONS Continued

	YES	NO	SOMETIMES
17   Have you improved your insulation in your home to save energy?			
18   Do you know that you could replace the 5 most used lights in your home with EnergyStar light fixtures and light bulbs and save 75% less heat, 75% less energy, and lasts 10 to 50 times longer?			
19   Do you know lighting uses 21% of home energy?			
20   Do you know LED (Light-Emitting Diode) lighting can transform home lighting and dramatically decrease your electricity use?			
21   Do you know that you can find about 60 EnergyStar appliances that can save energy and that if used over their lifetime EnergyStar appliances can reduce green house gases by 130,000 pounds and save you money – up to \$11,000 on energy bills over the lifetime of appliance use?			
22   Do you know if your fridge and stove are EnergyStar appliances?			
23   Do you know computers and the vacuum cleaner use 21% of your home energy?			
24   Do you know your other electronics; TVs, DVD player, music, games, etc. use about 16% of your home energy?			
25   Do you know, in the average Canadian home, 5% to 10% of the electricity consumed is used to power appliances and home electronics on stand-by?			
26   Do you know a surprisingly large number of electrical products can't be switched off completely without being unplugged?			
27   Do you know that to waste less food means to waste less energy?			
28   Do you know it takes a lot of energy to pump, treat, and heat water so saving water saves energy?			
29   Do you know we can help produce less green house gas and reduce toxins in our environment and in our water through small changes to home activities like closing the blinds and curtains on a warm day and opening them on a cold day to let the sun in?			

## Do you read the ingredient lists?

### RESPONSIBLE CONSUMERISM QUESTIONS

	YES	NO	SOMETIMES
1   Have you ever thought about choosing responsible clothing companies?			
2   Do you apply micro toxins and carcinogens on your skin through the ingredients listed on your personal care products: deodorant, lotion, shampoo, hand sanitizers, cosmetics or possibly through your home cleansers' ingredients?			
3   Do you read ingredient lists?			
4   Do you think about low-level contaminants in your food?			
5   Do you know your fish, particularly older and larger fish contain lead, mercury, PBDEs (flame retardants) and polychlorinated biphenyls or PCBs?			
6   Do you know that choosing sustainable seafood is an important step in saving our oceans' biodiversity?			
7   Do you know that there are sustainable seafood pocket guide cards to help inform your choice when you are shopping?			
8   Do you know that for every pound of shrimp caught by trawler boat, there are over 6 pounds of by catch thrown back, wasted, dead, and worthless into the ocean?			
9   Do you know that you are supposed to limit canned food and their plastic liners in your diet because of a Bisphenol A or BPA concern?			
10   Would you consider using a pocket guide for shoppers regarding the top ten canned foods to avoid?			
11   Do you know to avoid Polyvinyl Chloride (PVC) #3 plastic packaging?			
12   Do you know that children eat more food on a pound-for-pound basis than does an average-weight adult male, thus their exposures from food tend to be higher than those of adults?			
13   Do you know that buying organic food and other organic products whenever possible reduces your exposure to toxic chemicals?			
14   Do you buy organic when possible?			
15   Do you know that eating less meat also reduces carbon emissions?			
16   Do you know that there is almost one cow/goat/pig per person on earth, all consuming 10 times the bio resources of a plant based diet and releasing significant amounts of methane into our atmosphere?			
17   Would you eat at least one meat-less day per week?			
18   Do you know that two or more soft drinks a week almost doubles the risk of developing pancreatic cancer and a recent study among children showed that a high-energy-dense diet is associated with a higher risk for excess body fat during childhood?			
19   Do you know it is best to avoid buying food or household products in plastic #3, #6, or Styrofoam containers #7?			
20   Do you store food in re-usable containers instead of plastic wrap or aluminum foil?			

## Do you think twice about buying disposable products?

### RESPONSIBLE CONSUMERISM QUESTIONS Continued

	YES	NO	SOMETIMES
21   Do you know that to be an informed consumer includes knowing that your environmental sustainability concerns can influence purchases of home supplies: groceries, cleansers, garden products and other equipment, such as copy paper and computers; even a dinner out at a restaurant evokes informed choices such as type of restaurant, choice of food, etc.?			
22   Do you think twice about buying disposable products?			
23   Do you encourage your local stores to carry the products you want to buy?			
24   Do you know that of what we do import, that this should be transported by ship where kilogram for kilogram, sea transport is about 5 times less carbon intensive and more than 30 times more efficient than flying is?			
25   Do you ask the meat department of local grocery stores, restaurants, and sushi outlets if they are familiar with <i>OceanWise</i> , a sustainable seafood guide from the Vancouver Aquarium for restaurants, grocery and fish stores?			
26   Do you know to avoid PVC Packaging? <i>Learn about plastics, they are numbered between one and seven; know that #1, #2, #4 and #5 are safe. Know that # 3 also known as polyvinyl chloride or "PVC" and #6 also known as polystyrene (i.e. Styrofoam food trays, cups) and #7 also known as "Other" as in all other types of plastic including Polycarbonate, are all toxic.</i>			
27   Do you know the difference between plastic types? <i>Product packages marked with the #3, #6 and #7 recycling symbol contain BPA, Phthalates, or have other toxins or environmental issues and should be avoided.</i>			
28   Do you know about vinyl plastic wrap #3 and other food storage items? <i>Buy plastic wrap and bags made from polyethylene #2. For food storage, use glass containers or plastic containers marked with recycling symbols other than #3, 6 and 7.</i>			
29   Do you make personal decisions like: refusing to buy items with more than one layer of packaging, buying Canadian made and locally grown products, buying organic, boycotting products produced by known operators of sweatshops, buying used, reducing consumption, and reading labels for toxic ingredients etc.?			
30   Do you reduce flying travel as this releases huge amounts of carbon? <i>Plan family vacations close to home. Learn about the impacts of air travel and consider vacationing close to home.</i>			
31   Were you aware that the paper industry is the third greatest contributor to global warming emissions?			
32   Do you know how to practice sustainable consumption? <i>For example, making sure your printer paper is 100% post-consumer recycled paper. Here is a formula: First, ask questions: Where does the product originate? How much energy does it use? What is it made of? What will happen to it when you are finished using it? Are the products we consume in Canada providing healthy communities where they were made?</i>			

**Do you think guardians should be worried  
about toxic chemicals in the environment?**

**HOME TOXICITY QUESTIONS**

	YES	NO	SOMETIMES
1   Do you want to get up to speed about all product recalls, toy recalls, and lead specific recalls that relate to health and safety?			
2   Do you know that kid's jewelry made of plastics and Halloween cosmetics are often toxic?			
3   Do you ever think about cadmium, lead or BPA polluting our drinking water or food supply?			
4   Do you think guardians should be worried about toxic chemicals in the environment?			
5   Do you know what percentage of plastic your bed is made of?			
6   Do you sleep on the couch? <i>A study suggests that approximately 50% of the residential couches in use are treated with carcinogenic fire retardant chemical (TDCPP) used after 2005. Source: <a href="http://pubs.acs.org/doi/pdf/10.1021/es303471d">http://pubs.acs.org/doi/pdf/10.1021/es303471d</a></i>			
7   Do you know that a recliner chair besides being stuffed with foam that is likely 11 – 20% by weight made from Polybrominated diphenyl ethers (PBDEs), is also covered in fabric that is possibly made with toxic chemicals that make it stain resistant, fire resistant and wrinkle resistant?			
8   Did you know about household dust and that researchers (other study ) found 44 flame retardant chemicals in household dust?			
9   Do you know if your cosmetics and personal care products are safe and non-toxic?			
10   How would you know; would you consider using a shopper's pocket guide designed to help you look for ingredients to avoid?			
11   Do you know household products like air fresheners, release pollutants more or less continuously?			
12   Do you know if you heat your home with a combustible fuel source you could monitor your CO levels for increased safety?			
13   Do you know that combustible fuel sources: stove, oil heater, fire or wood heat, coal, etc. release carbon monoxide and that it is a poisonous, colourless, tasteless gas that can harm you if not properly vented?			
14   Does Canada permit the use of pesticides that other countries have banned for health and environmental reasons?			
15   Were you aware that non-stick pans should never be over-heated or have their surface scratched?			
16   Do you eat popcorn?			
17   Do you know if your food is a genetically modified organism or GMO?			
18   Do you avoid food dyes?			
19   Do you know that many home cleaning products are toxic?			
20   Did you know that most household cleaners are also Household Hazardous Waste (HHW), including abrasive and all-purpose cleaners, aerosol air fresheners, bleach, disinfectants, drain cleaners, fabric softeners, glass and toilet cleaners?			
21   Do you clean your carpets at home with carpet cleaner?			

Do you know of any non-toxic way to control weeds or pests?

HOME TOXICITY QUESTIONS Continued

	YES	NO	SOMETIMES
22   Did you know that many household cleaners including laundry detergents are linked to asthma?			
23   Do you know that soap has been replaced by detergents made from petrol?			
24   Do you know that hand sanitizers are safe if properly used, assuming you do not have allergies or have an unhealthy immune system, and use it no more than a few times per day when normal hand washing is not available?			
25   Do you know that proper use of hand sanitizer is defined as “use only when soap and water are not available and hands are not visibly dirty, except for schools where its use may be an alternative to hand washing?”			
26   Do you know that Household Hazardous Waste (HHW) also includes hair colouring, car wax, nail polish remover, rechargeable batteries, and shoe polish?			
27   If you use pesticides/herbicides for your lawn or garden? Do you store home pesticides in a locked cabinet?			
28   Does the person applying the home pesticides/herbicides have any training?			
29   Do you know what weeds or pests you are targeting?			
30   Do you know of any non-toxic way to control weeds or pests?			
31   Do you use preventative and non-chemical control methods first before pesticides/herbicides are used?			
32   Do you keep a record of home pesticide/herbicide applications, i.e., type, date, or amount?			
33   Do you know what the actual pesticides/herbicides used is?			
34   Do you use pesticides/herbicides routinely?			
35   Do you alert your neighbours of your pesticide/herbicide use, especially neighbours with small children and pets?			
36   Do you have a home emergency management plan/kit to address possible pesticide/herbicide accidents or exposures due to on-site pesticide use or use on neighbouring properties?			
37   Do you know of any concern for chronic disease and environmental health related to pesticides/herbicides?			
38   Were you aware that the six common air pollutants are ground level ozone, particulate matter, carbon dioxide, nitrogen dioxide, sulfur dioxide, and lead?			
39   Do you know that the six key well-mixed greenhouse gases are: carbon dioxide (CO <sub>2</sub> ), methane (CH <sub>4</sub> ), nitrous oxide (N <sub>2</sub> O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF <sub>6</sub> ); and that they are in the atmosphere with us and threaten our health? The EPA concluded “that the current and projected concentrations of the six key well-mixed greenhouse gases in the atmosphere threaten the public health and welfare of current and future generations.”			
40   Do Canadians have any legally binding standards for air quality and drinking water?			

Do you know where your drinking water comes from?

WATER CONSERVATION AND WASTE REDUCTION QUESTIONS

YES NO SOMETIMES

	YES	NO	SOMETIMES
1   Do you know how water pollution flows into the ground water?			
2   Do you know what chemicals get washed down your drain and into the ground water?			
3   Have you taken actions in your home to help reduce pollution and improve ground water in your own back yard?			
4   Were you aware that active transportation waste (such as oil and exhaust emissions) runs off into drains & ditches?			
5   Do you know where the water drains in your home go?			
6   Do you know where the water from your toilet goes?			
7   Do you know that all chemicals used in your home, including antibiotics and other prescriptions, go down the drain and into your environment?			
8   Do you know where your drinking water comes from?			
9   Do you know where the water from the storm drain or ditch nearest your house goes?			
10   Do you know the names of the closest creek, river, lake, and ocean, to your home?			
11   Do you use plastic water bottles?			
12   Do you know that with the same amount of energy it takes to produce one new aluminum beverage can, you can make as many as 20 cans from recycled aluminum?			
13   Do you know recycling paper takes 70% less energy than making it from scratch?			
14   Do you know some washing machines use 40 or more gallons for each load?			
15   Do you have reduce, reuse, recycle, and compost systems in your home?			
16   Did you try to reduce waste prevention by stopping the junk mail and holiday catalogues, and recycling of other paper products?			
17   Do you know the Organization for Economic Co-operation and Development (OECD) reported in 2005 that Canadians produced 380 kg of municipal waste per person per year?			
18   Do you know that in 1960 the average family created 30 pounds of plastic waste per year and that today the average family creates 1600 pounds of plastic waste per year?			
19   Do you know the amount of plastic produced from 2000 - 2010 exceeds the amount produced during the entire last century?			
20   Did you know that plastic is the most common type of marine litter worldwide?			

Do you know how long it takes for food and other items to decompose?

WATER CONSERVATION AND WASTE REDUCTION QUESTIONS Continued

	YES	NO	SOMETIMES
21   Do you know how long it takes for food and other items to decompose? Paper Towel   2-4 weeks Banana Peel   3-4 weeks Newspaper   6 weeks Paper Bag   1 month Cardboard   2 months Apple Core   2 months Cotton Glove   3 months Orange Peels   6 months Plywood   1-3 years Wool Sock   1-5 years Milk Cartons   5 years Cigarette Butts   10-12 years Leather shoes   25-40 years Tinned Steel Can   50 years Foamed Plastic Cups   50 years Rubber-Boot Sole   50-80 years Plastic containers   50-80 years Aluminum Can   200-500 years Plastic Bottles   450 years Disposable Diapers   550 years Plastic Bags   20-1000 years Monofilament Fishing Line   600 years Glass   1-2 million years <i>Waste less food, most people would be shocked to discover they throw out up to 1/3 of the food they purchase.</i>			
22   Do you know a leaky toilet can lose 200 gallons of water per day; or that displacing a gallon of water by inserting a gallon size container into the toilet water tank displaces water and saves a gallon of water with each flush?			
23   Did you know it helps to save energy, if you water your yard in the coolest part of the day and only use what you need?			
24   Do you avoid plastics and aluminum foil when wrapping your child's lunch?			
25   Do you know detergents do not degrade going down the drain? One kilogram of detergent takes 20,000 liters of water at a water treatment plant to reduce its toxicity, and still much of it goes into the watershed.			
26   Do you want to challenge your family to reduce their plastic weekly water bottle use?			

### WEEK THREE OF SIX

#### Home Eco-Audit #2

- 1| Send students home with instructions to complete their second **Home Eco-Audit** by Friday.
- 2| Monday – Thursday students complete their Home Eco-Audit #2.
- 3 | Students total the results of their two **Home Eco-Audits** (using the tables found on pages 27-28), then analyze this data and include it in written and graphical form (page 29) for their **Individual Household Report** (page 30-33) due in week 4.
- 4| Encourage your students to review the **Student Instructions – Individual Household Report** for next week's work over the weekend.

### WEEK FOUR OF SIX

#### Individual Sustainability Report

- 1| Review with the students the **Student Instructions – Individual Household Report**. Assign students to write their own **Individual Household Report** using the **Student Reports Template** to present their own data and the information they gleaned during classroom discussion.
- 15| Students are to return Friday with their completed **Individual Household Report** versions that are reviewed in class. Ask students to take their report home over the weekend to show their parent/ guardian. Students will use data presented in their **Individual Household Report** next week to generate their classroom's collaborative **Home Eco-Audits Report**.

## The Jellyfish Action Project

### Individual Household Report

#### Teacher Instructions

##### STEP ONE

Some of the **Home Eco-Audit** questions provided a direct numerical response, but other audit questions need to be given a numerical value by matching qualitative answers with the appropriate score result. i.e.:

no = 1

sometimes = 0.5

yes = 0

##### STEP TWO

Have students total all of their responses from each of the four categories:

Energy Conservation

Responsible Consumerism

Home Toxicity

Water Conservation and Waste Reduction

**STEP THREE**

Ensure students tally and record the differences in their results between audit #1 and audit #2 into one row on the table.

AUDIT QUESTIONS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	TOTAL
<b>Energy Conservation</b>																															
AUDIT SCORE	1 <sup>st</sup>																														
Student #1	2 <sup>nd</sup>																														
Student #2																															
Student #3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															
13																															
14																															

**Responsible Consumerism**

1	AUDIT SCORE	1 <sup>st</sup>																													
		2 <sup>nd</sup>																													
2																															
3																															
4																															
5																															
6																															

AUDIT QUESTIONS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	TOTAL
<b>Home Toxins</b>																															
1	AUDIT SCORE																														
	1 <sup>st</sup>																														
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<b>Water Conservatic</b>																														
<b>Waste Reduction</b>																														
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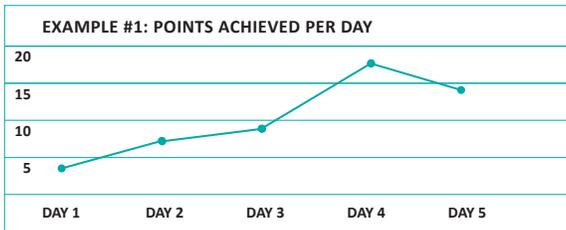
**STEP FOUR**

Encourage students to use the data from the tables to present their results in graphical form for their reports. Report requirements are found on pages 28-29 of this document

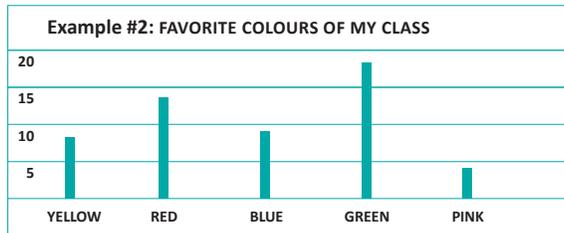
**Graphs**

Now that the students have their results, provide options to the students to showcase their results on a graph in the clearest, most professional way possible. Three of the most common types of graphs are:

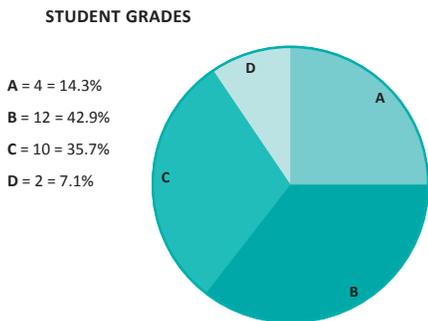
Line Graph | illustrates results over time  
(i.e., from 1st Audit to 2nd Audit):



Bar Graph | illustrates results by quantity:



Pie Chart | illustrates results as part of a whole  
(good for showing percentages).



**STEP FIVE**

Have students complete their **Individual Household Reports**. Student instructions are available on pages 28-29 of this document.

The hope is that you will make beneficial changes in your home that will help lessen the impact your household has on the environment.

## The Jellyfish Action Project

### Individual Household Report

### Student Instructions

While participating in your Jellyfish Action Project (JFAP), you will conduct two audits of your home. The first is conducted to gather information about your energy and water use, waste, knowledge of responsible consumerism, and the toxic substances found in your home. The second audit will be conducted to assess the improvements you and your family will have made to your home since completing the first audit. The hope is that you will make beneficial changes in your home that will help lessen the impact your household has on the environment. You are responsible for writing a report on your findings and for sharing this information with your friends, family, school and community.

As a result of completing your JFAP, you will have had an impact on your home and your community by encouraging people to save energy and ultimately, our planet. We hope that you find this project both engaging and meaningful. Like most things in life, the more you put into the JFAP, the more you will get out of it. Please read the entirety of this document before proceeding with your project.

#### Student Learning Objectives

- Understand how conditions in your home affect environmental health.
- Appreciate responsible consumerism and energy consumption; household toxicity prevention; water conservation, and waste reduction.
- Advocate for actions that reduce global warming and increase sustainable best-practices.
- Develop critical thinking skills needed to be a mindful energy consumer.
- Creatively, ethically, and collaboratively problem-solve with globalization and sustainability in mind.

#### 1 | Cover/ Title Page

A strong cover page sets the tone for your report and should include appropriate information about your class, your name, and a strong title. You may also wish to use images of your community or environment.

#### 2 | Table of Contents

A table of contents will help your readers quickly and easily navigate your report.

#### 3 | Welcome Statement

Your welcome statement is more than just an outline of activity. It should describe your objectives, how participation in the **Jellyfish Action Project** affected you, it should also illustrate the insights you have gained and provide a summary of suggestions for improving eco-friendly strategies in your community.

#### 4 | Introduction

- Provide a summary of your class; information about your school and school district and the number of students therein.
- Describe the goals of this project and what you hope will occur in your home and community regarding sustainability issues: Examples goals you may wish to address:
  - increase awareness of health risks caused by home based toxins
  - encourage responsible consumerism
  - reduce energy use
  - save money
  - adopt household waste reduction and water conservation strategies
  - share knowledge with family and community
  - a description of your time line, methods, interesting facts and a highlight of the qualitative and quantitative results
  - discuss different options of distributing the results of these audits to your community, i.e. through newspaper articles, presentations, or school announcements

**Provide ideas to increase your energy conservation and reduce emissions in the future.**

## **5 | Body of Report**

Discuss different environmental issues (or potential issues) that emerged during the audits that are prevalent in your home or community, discuss the improvements you have made or hope to make as a result of these audits. Use tables and graphs to illustrate your results. Topics you may wish to cover may include:

### **Environmental Awareness**

Discuss how your audit results influenced your ideas about the environment and sustainable practices in the home.

### **Energy Conservation and Emissions Reduction**

Discuss strategies to conserve energy and reduce emissions that emerged in the audits in greater detail, provide ideas to increase your energy conservation and reduce emissions in the future.

### **Responsible Consumerism**

Discuss the changes you have made in your household regarding the purchases you make, i.e. household supplies; groceries; garden products, technological equipment, etc. Discuss responsible consumer strategies that you have learned about in greater detail:

- composting and recycling
- sustainable seafood consumption
- 100 mile diet
- reading ingredient lists to avoid known toxins and carcinogens
- avoiding Volatile Organic Compounds (VOCs)
- buying eco-friendly products (i.e., less packaging, organic)

### **Home Toxicity**

Discuss how many, if not most, personal care products (shampoo, deodorant, toothpaste, hair spray, cosmetics, etc.) and home cleansers contain known toxins or carcinogens that are often applied multiple times per day. We are repeatedly exposed to these micro-toxins that are absorbed by our skin and lungs and pollute our planet's water and air.

### **Water Conservation**

Discuss and report your water usage, what goes down your drain, and your municipality's wastewater management practices. Information can be gathered from your audit results in addition to your hydro bills, water meters, and shower water capture bags.

### **Water Contaminants**

Discuss in depth that toxic chemicals enter our water cycle by way of medications in urine; pesticides from washing vegetables; toxins and carcinogens in personal care products and cosmetics, and home cleansers. Include information about the ingredients in products used to clean clothes, hair, pets, homes, and vehicles.

### **Waste Reduction**

Discuss and report on your treatment of non-hazardous and hazardous materials such as batteries; paints and solvents; pressurized cans; weed killer; medicines, and common household items. Discuss your waste disposal, composting, recycling and reuse policies. If a certain waste material, such as cardboard or plastic is significant, you might consider addressing it in more detail. Highlight audit results such as greatest and least total waste generated per home and class and any subsequent waste reduction accomplished.

## **5 | Summary**

Use your **Home Eco-Audit** results to report on your home both before and after the **Home Survey**. Your **Individual Household Report** should show the changes you implemented (or intend to implement) in your home and how you increased sustainability, reduced energy usage, and saved money, etc.

## PROCEDURE WEEKS FIVE AND SIX

### WEEK FIVE OF SIX

#### Class Home Eco-Audits Report

1 | Have students decide what they consider the best content from their **Individual Household Reports** to be and use it to create a **Collective Home Eco-Audits Report**, which as a class you will present to the school and community upon completion. Have your students decide upon the best content via a collaborative decision-making process reached by consensus or majority vote.

2 | Students then weave together their mutually agreed upon content into a final **Collective Home Eco-Audits Report**. You and your students can develop a strategy to best disseminate and distribute this final report. You decide what form it will take and work on it together, will it be a newspaper article, a piece of artwork for your school, another written report, or public service announcement. By distributing your report, your students will feel a sense of pride for what they have accomplished.

### WEEK SIX OF SIX

#### Distribution

The ultimate audience for the **Collective Home Eco-Audits Report** is your community who can use it to also reduce energy use, save money, and benefit from sustainable best-practices.

1 | Students present their end result, the **Collective Home Eco-Audits Report**, to their school and community (in person, radio, television, and social media outlets). You may wish to distribute the report with another letter of introduction called, "**Letter to the Guardians, School or The Greater Community**" (found on page 31) that invites family, friends, and neighbours to learn about the students' experience and have the opportunity to do their own **Home Eco-Audit**. Thus, your entire community can reap the benefits of the **JFAP**.

2 | Share with the Community. This report becomes a tool to drive positive, ongoing changes and continued strides towards making your whole community truly sustainable. No matter what type of community you are in, taking a proactive approach to environmental sustainability is not only a healthy home decision, it's a smart strategy. The **Collective Home Eco-Audits Report** is an important outward testament of your students' commitment to a sustainable future and should be recognized as a contribution to your whole community. What commitments will you make as a class and individuals to improve sustainability practices in your community.

3 | Grading Possibilities:

- Home Eco-Audit #1 – Percentage completed
- Private Home Survey – Percentage completed
- Home Eco-Audit #2 – Percentage completed
- Class Discussion Participation
- Quality of the Reports

A potential grading rubric can be found on page 32 of this document.

## LETTER TO THE GUARDIANS, THE SCHOOL AND THE GREATER COMMUNITY

Date

Dear Parents/Guardians, Friends, and Neighbours,

**Re: Collective Home Eco-Audit Report**

We are writing to inform you of the results of our **Jellyfish Action Project's - Collective Home Eco-Audits Report**. Participating in this project helped us understand how to reduce our energy use, save money, reduce waste, conserve water, and reduce the use of toxins in our homes.

Another goal of this project is community outreach, to share our achievements with our friends and neighbours. Attached to this letter you will find a copy of our final report which we hope you share with everyone you know! We hope that you find it as interesting and exciting as we did.

Student's name and Signature

P.S. If you would like to learn a little more about how to make your home more sustainable, or access a free on-line resources, please visit  
The Jellyfish Project's website: [www.thejellyfishproject.org](http://www.thejellyfishproject.org).

# The Jellyfish Action Project

## Sample Rubric

Student _____ Date: _____	LEVEL FOUR	LEVEL THREE	LEVEL TWO	LEVEL ONE		
<b>KNOWLEDGE   UNDERSTANDING</b> Demonstrates knowledge and understanding of how their home environment is related to our outside environment.	<b>Thorough</b> Knowledge and understanding	<b>Considerable</b> Knowledge and understanding	<b>Some</b> Knowledge and understanding	<b>Limited</b> Knowledge and understanding		
<b>THINKING/ INQUIRY</b> Demonstrates the use of critical and creative thinking skills and contributes to the community by sharing knowledge learned and imparting wisdom. <i>Problem solving, decision-making, research, reflection, presentation, and report writing.</i>						
<b>APPLICATION</b> Demonstrates the use of the <b>Home Eco-Audits (HA)</b> , <b>Private Home Survey (PHS)</b> , <b>Individual Household Report (IHR)</b> and <b>Home Eco-Audits Report (HAR)</b> in order to make a positive change in their community.	HA PHS IHR HAR 	HA PHS IHR HAR 	HA PHS IHR HAR 	HA PHS IHR HAR 		
<b>COMMUNICATION</b> Communicates project process through <b>Home Eco-Audits (HA)</b> , <b>Private Home Survey (PHS)</b> , <b>Individual Household Report (IHR)</b> and <b>Collective Home Eco-Audits Report (HAR)</b> . <i>Spelling, grammar, organization, effectiveness of layout, thoroughness, clarity, terminology, etc.</i>	HA PHS IHR HAR 	HA PHS IHR HAR 	HA PHS IHR HAR 	HA PHS IHR HAR 		

**Celebrate and reflect:** Share the results of the JFAP *Collective Home Eco-Audits Report* and your *Individual Household Report* with your home decision-makers, school and community.

---

## FOOTNOTES

- 1| [http://en.wikipedia.org/wiki/Compact\\_fluorescent\\_lamp](http://en.wikipedia.org/wiki/Compact_fluorescent_lamp);
- 2| [http://eartheasy.com/live\\_energyeff\\_lighting.html](http://eartheasy.com/live_energyeff_lighting.html)
- 3| [https://www.bchydro.com/powersmart/residential/guides\\_tips/green-your-home/lighting\\_guide/Turn\\_Off\\_Unnecessary\\_Lights.html](https://www.bchydro.com/powersmart/residential/guides_tips/green-your-home/lighting_guide/Turn_Off_Unnecessary_Lights.html)
- 4| <http://www.consumerenergycenter.org/myths/appliances.html>
- 5| <http://ehs.columbia.edu/ReduceReuseRecycle.html>, <http://nest.com/thermostat/life-with-nest-thermostat/#meet-the-nest-learning-thermostat>
- 6| <https://ethicalelectric.com/HowItWorks/EnergyEfficiency>
- 7| [http://en.wikipedia.org/wiki/Wikipedia:Reference\\_desk/Archives/Science/2007\\_August\\_9](http://en.wikipedia.org/wiki/Wikipedia:Reference_desk/Archives/Science/2007_August_9)
- 8| [http://ec.europa.eu/clima/citizens/tips/tips\\_01\\_en.html](http://ec.europa.eu/clima/citizens/tips/tips_01_en.html)
- 9| <http://www.hydroquebec.com/residential/save-energy/household/household-appliances/>
- 10| [http://www.bchydro.com/powersmart/residential/guides\\_tips/green-your-home/appliances\\_guide/refrigeration.html](http://www.bchydro.com/powersmart/residential/guides_tips/green-your-home/appliances_guide/refrigeration.html)
- 11| <http://www.sustainablebabysteps.com/energy-saving-tips.html>
- 12| [http://www1.agric.gov.ab.ca/\\$Department/deptdocs.nsf/all/csi13484/\\$FILE/Local-Food-A-Rural-Opp.pdf](http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/csi13484/$FILE/Local-Food-A-Rural-Opp.pdf)
- 13| <http://energy.gov/energysaver/articles/reduce-hot-water-use-energy-savings>
- 14| [https://www.bchydro.com/powersmart/residential/guides\\_tips/green-your-home/appliances\\_guide/drying\\_laundry.html](https://www.bchydro.com/powersmart/residential/guides_tips/green-your-home/appliances_guide/drying_laundry.html)
- 15| <http://www.epa.gov/p2/pubs/energy.html>
- 16| [http://www.ucsusa.org/clean\\_vehicles/smart-transportation-solutions/better-fuel-efficiency/how-to-maximize-your.html](http://www.ucsusa.org/clean_vehicles/smart-transportation-solutions/better-fuel-efficiency/how-to-maximize-your.html)
- 17| [http://www.hydro.mb.ca/your\\_home/resources/1\\_sealing\\_caulking\\_weatherstripping.pdf](http://www.hydro.mb.ca/your_home/resources/1_sealing_caulking_weatherstripping.pdf)
- 18| [http://www.davidsuzuki.org/publications/resources/2010/think-twice-about-eating-farmed-salmon?gclid=CLKU57CvxLoCFel\\_QgodaH0AMQ](http://www.davidsuzuki.org/publications/resources/2010/think-twice-about-eating-farmed-salmon?gclid=CLKU57CvxLoCFel_QgodaH0AMQ), [http://en.wikipedia.org/wiki/Mercury\\_in\\_fish](http://en.wikipedia.org/wiki/Mercury_in_fish)
- 19| <http://www.state.nj.us/humanservices/opmredd/health/bpa.html>, <http://www.cancerschmancer.org/articles/cancer-prevention/what-plastics-do-our-bodies>
- 20| <http://www.sustainabletable.org/254/local-regional-food-systems>
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- 23| [http://kidshealth.org/parent/nutrition\\_center/healthy\\_eating/myplate.html](http://kidshealth.org/parent/nutrition_center/healthy_eating/myplate.html), <http://healthyeating.sfgate.com/disadvantages-prepackaged-food-2409.html>
- 24| <http://ecowatch.com/2013/08/21/california-city-bans-plastic-bags-styrofoam/>
- 25| <http://www.cdc.gov/homeandrecreationsafety/poisoning/>
- 26| [http://en.wikipedia.org/wiki/Water\\_fluoridation](http://en.wikipedia.org/wiki/Water_fluoridation)
- 27| <http://community.breastcancer.org/livegreen/lets-talk-toothpaste/>
- 28| [http://ec.europa.eu/research/industrial\\_technologies/pdf/nano-hands-on-activities\\_en.pdf](http://ec.europa.eu/research/industrial_technologies/pdf/nano-hands-on-activities_en.pdf)
- 29| <http://www.mnceh.org/cadmium-and-other-toxic-chemicals-contaminate-most-halloween-make-please-ask-your-senator-co-sponsor>, [www.huffingtonpost.com/amy-ziff/halloween-makeup\\_b\\_4006756.html](http://www.huffingtonpost.com/amy-ziff/halloween-makeup_b_4006756.html)
- 30| <http://www.fda.gov/forconsumers/consumerupdates/ucm297954.html>
- 31| <http://www.ext.colostate.edu/pubs/foodnut/09380.html>, <http://goodgreenhabits.com/wash-your-fruits-veggies-with-vinegar/>
- 32| <http://hubpages.com/hub/Plastics-to-Avoid>
- 33| <http://www.foodandwaterwatch.org/water/bottled/>
- 34| [http://eartheasy.com/grow\\_nat\\_pest\\_cntrl.html](http://eartheasy.com/grow_nat_pest_cntrl.html)
- 35| <http://www.davidsuzuki.org/issues/health/science/pesticides/highlights-of-ontarios-cosmetic-pesticide-ban/>
- 36| [http://msue.anr.msu.edu/news/managing\\_waste\\_household\\_septic\\_systems\\_part\\_one](http://msue.anr.msu.edu/news/managing_waste_household_septic_systems_part_one), <http://www.planetkids.biz/documents/factandfigs.pdf>
- 37| [http://en.wikipedia.org/wiki/Water\\_pollution](http://en.wikipedia.org/wiki/Water_pollution), <http://www.waterencyclopedia.com/Oc-Po/Pollution-of-Groundwater.html>, <http://chamisa.freeshell.org/pollution.htm>
- 38| <http://kangenlivingwater.wordpress.com/2013/07/29/this-everyday-healthy-beverage-poisons-your-body-one-swallow-at-a-time/>  
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- 39| <http://ecowatch.com/2013/08/21/california-city-bans-plastic-bags-styrofoam/>
- 40| [http://en.wikipedia.org/wiki/Six\\_pack\\_rings](http://en.wikipedia.org/wiki/Six_pack_rings), <http://www.straightdope.com/columns/read/1336/should-you-cut-up-six-pack-rings-so-they-dont-choke-sea-birds>

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## The Jellyfish Action Project

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**The Jellyfish Project** | A coalition of musicians  
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**Dan Kingbury & Green Angel Training** | A part-time,  
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16 years and older. www.greenangeltraining.org

