

teacher's manual for division 1 and 2 student sheets

This “how-to” guide contains the following information:

- General Explanation of the Students Sheets (masters)
- Answers to questions on masters
- Background information for each simple act (to support the Student Sheets)

Division 1 Acts for Grades 1 - 3

In grades 1 - 3 classrooms, you may decide to have all your students complete the same simple act, or you may have your students choose the simple act they would like to complete. You may also select from other simple acts found in the grades 4 - 6 section.

1 I WILL REUSE AND RECYCLE PAPER.

Vocabulary

Before the students proceed with the Draw It! section, you may want to spend time discussing the words, **reuse** and **recycle** to build word meaning. A root word exercise may be good here because both words begin with “re” which means “again.”

Draw It!

In the Draw It! section, students are asked to draw a picture that shows reuse and recycle. This is intended to build meaning and have the students “show what they know.” The students can draw anything. Here are some ideas of what they can draw:

- A picture of them putting a bottle into a recycling bin
- The recycling mobius loop
- A pop bottle being used for a bird feeder
- A picture of a paper reuse station in the classroom
- Newspapers being used in an art project
- A family taking a bag of clothes to a second hand store

Do It!

Students are asked why it is important to reuse and recycle. We have provided you with a few examples, but here are a few more:

- Save trees and natural resources
- Help people by sharing what we no longer need
- Save energy
- Save money

There are no wrong answers – the main point is for students to choose their own words to describe why they think this simple act is important.

Commit to Act

- Commitment cards
- Commitment poster

Action

Students and teachers spend the commitment period reusing and recycling. By now, you have discovered many ways that you can put your simple act into action!

Done!

Students can use the check boxes (or place stickers) to track their progress (self-evaluation) through the commitment period. This Done! list is meant to help illustrate success to the students while they complete their simple acts.

Background Information**Why Act?**

Schools use a significant amount of paper products daily. In fact, 34 per cent of waste that enters Alberta's municipal landfills is paper products. By reusing then recycling the paper used by students, a school can have a tremendous impact on the amount of paper than ends up in the landfill. This practice can also save the school community money where practical reduction in paper use may also be achieved by working electronically.

Your Impact

- One sheet of average bond paper weighs approximately 5 grams. Students who reduce their paper used by 10 pages a day could reduce their paper waste by up to 50 grams of paper a day or 10 kilograms in a school year.
- Paper and paperboard consumption in Canada in 2000 was estimated to be 7.9 metric tonnes.
- Recycling one tonne of newspaper saves:
 - 17 trees
 - 3 cubic metres of landfill space
 - 26 498 litres of water
 - 27 kilograms of carbon dioxide emissions
- In the process of manufacturing recycled paper:
 - 74 per cent less air pollution is generated compared to virgin fibre manufacturing
 - 35 per cent less water pollution is generated
 - 58 per cent less water is required
 - 64 per cent less energy is required
- Approximately 80 per cent of office waste is paper and of that 70 per cent is not recycled.
- 10 million hectares of ancient forests are destroyed each year throughout the world, the equivalent of 1 football field every 2 seconds.

Sources & Websites

Recycling Basics from the Regional District of Central Kootenay
www.rdck.bc.ca/environmental/waste/recycling/recycling_basics.html

Recycling Facts from Cascades Recycled Paper Company
www.cascades.com/site/tissue-paper/environment/recycling.html

Waste Reduction Week Canada
www.wrwcanada.com/download_facts.htm



2 I WILL RECYCLE MY DRINK CONTAINERS.

Draw It!

In the Draw It! section, students are asked to draw the kinds of beverage containers that can go into your school's recycling bin. The students can draw anything. Here are some ideas of what they can draw:

- Juice boxes/aseptic juice containers
- Pop bottles
- Cans
- Plastic drink bottles
- Milk cartons

You can compile all the ideas and make a final list for display in the classroom or lunch area. This way, students can always be reminded that all beverage containers are recyclable.

Do It!

Before you begin this simple act, you may want to complete a mini-audit and collect all beverage containers for a day or a week. This can be very impactful because students can “see” the difference they can make. Keep track of this number and see if you recycle the same amount, more or less each day or week of your commitment period.

Recycling can be a complex idea if students don't have a good understanding of what the recycled products can be used for in the future. Visit the Alberta Beverage Container Recycling Corporation website (www.abcrc.com) and go to “Follow that container” or print out the PDF, “The Life Cycle of Containers,” to find out what happens once the recycling leaves your classroom. Ask students to write down the end products of their recycled beverage containers.

Commit to Act

- Commitment cards
- Commitment poster

Action

Students and teachers spend the commitment period recycling beverage containers. Be sure and find out the location of the nearest bottle depot and organize a teacher pool to collect containers for rewards and recycling.

Done!

Students can use the check boxes (or place stickers) to track their progress (self-evaluation) through the commitment period. This Done! list is meant to help illustrate success to the students while they complete their simple acts.

Background Information

Why Act?

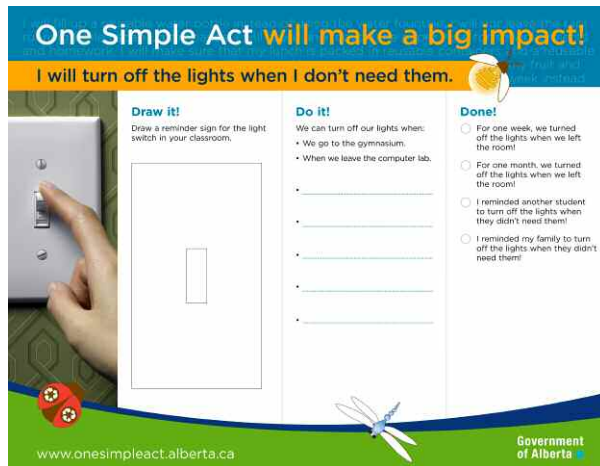
Beverage containers can be recycled for cash which can be put towards fundraising efforts. By choosing to recycle your drink boxes and beverage containers, you can significantly reduce the amount of waste your school is throwing in the landfill.

Your Impact

- Students can divert 74 grams of beverage container waste each day or 14.8 kilograms in one school year.
- Every year, 2.4 million tonnes of solid waste goes to Alberta's municipal landfills. This equals the weight carried by 240,000 garbage trucks.
- This could be reduced by practicing the 3 R's – Reduce, Reuse and Recycle. Each student can reduce waste by 16 kilograms each school year just by recycling their beverage containers.
- In 2007, Albertans saved the equivalent of over 264,000 barrels of crude oil by recycling their beverage containers. If we returned the remaining 403 million beverage containers we would save 93 thousand more barrels of crude oil.
- Recycling aluminum creates 97 per cent less water pollution than producing new metal from ore.
- Creating one aluminum can from ore requires the same amount of energy as making 20 aluminum cans from recycled materials.
- It takes less energy to produce a new can from recycled aluminum than new materials.
- Recycling one aluminum can saves enough energy to run your TV for 3 hours

Sources & Websites

Alberta Beverage Container Recycling Corporation
www.abcrc.com



3 I WILL TURN OFF THE LIGHTS WHEN I DON'T NEED THEM.

Draw It!

In the Draw It! section, students are asked to draw a reminder sign for the switch plate in your classroom. The reminder can be placed at ANY light switch, including the library, art room, lunch area or computer lab. You can use the switch plate template on the next page. You can also create a template for another sized switch plate or a mini-poster.

Do It!

With your students, make a list of all the locations you can turn off the lights. Some areas, such as hallways, may need to be lit at all times for safety reasons. Explain these reasons to your students. Other areas, such as the music room, art room or computer lab may be good place in which to take action. Think of unusual “turn it off” locations such as: lamps, aquaria, resource or reading rooms, and pet cages.

Commit to Act

- Commitment cards
- Commitment poster

Action

Students and teachers spend the commitment period turning off lights when not in use. Perhaps, if your classroom has a window, you can turn off the lights even when you are in the room. Quiet times may benefit from low lighting – consider turning off one bank of lights and leaving the rest on. Adopt a policy for teacher areas such as washrooms and the staffroom. Show your students that the teachers are taking action too!

Done!

Students can use the check boxes (or place stickers) to track their progress (self-evaluation) through the commitment period. This Done! list is meant to help illustrate success to the students while they complete their simple acts.

Background Information

Why Act?

Classroom lights are potentially left on for 8 hours a day. This is a tremendous amount of energy for every school day in the year. The lights don't need to be on during recess and children even seem calmer when the lights are off at lunch (provided there is natural light of course). If the lights in the classroom are on different switches, only use the amount of light you need.

Your Impact

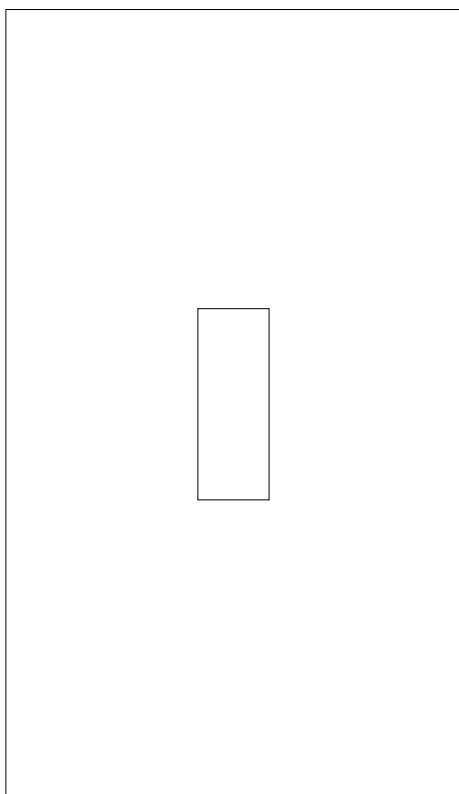
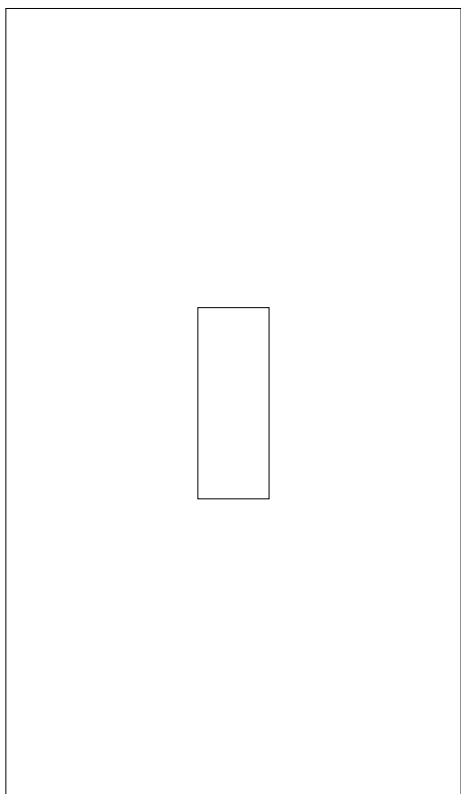
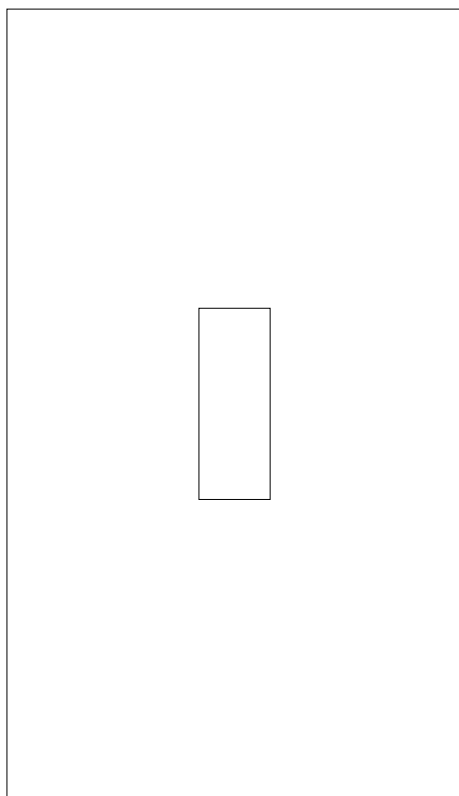
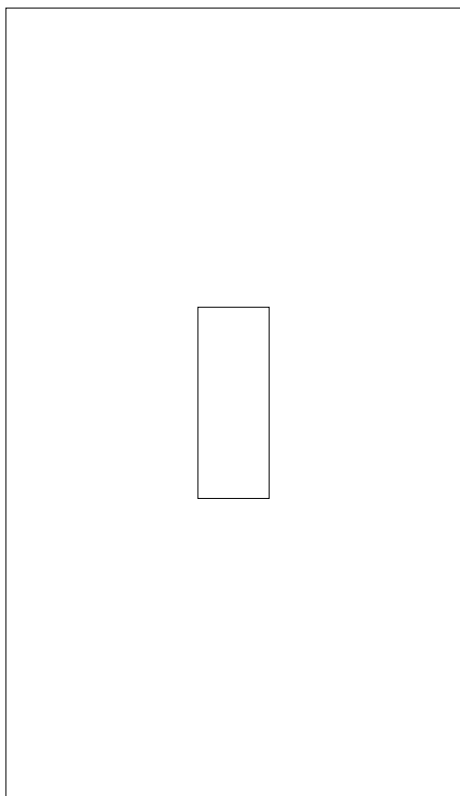
- If each student turned off lights just 10 per cent of the time, 70 grams of CO₂ could be prevented from entering the atmosphere each day or 14 kilograms of CO₂ per school year.
- Lighting accounts for nearly 50 per cent of the electrical bill for most schools.

Sources & Websites

Alliance to Save Energy (USA)
www.ase.org/content/article/detail/625

National Energy Education Development Project, Energy Information Books for all grade levels, (USA)
www.need.org/

Light activities from Earth Care Canada
www.earthcarecanada.com/EarthCARE_Program/Lessons/4_light_detective.pdf



One Simple Act will make a big impact!

I will compost my fruit and vegetable scraps.



Draw It!
Draw pictures of **good** things to put into the composter.
Here is an example:

Do It!
Why is it important to compost our fruit and vegetable scraps?
When we compost, we:
• Make less garbage
• Make a home for bugs, worms and insects.

Done!

- We composted our vegetable and fruit scraps for one week!
- We composted our vegetable and fruit scraps for one month!
- I reminded another student to put their vegetable and fruit scraps into the compost bin!
- I reminded my family to put their vegetable and fruit scraps into the compost bin!

Draw pictures of things **not** to put into the composter.
Here is an example:

www.onesimpleact.alberta.ca

Government of Alberta

4 I WILL COMPOST MY FRUIT AND VEGETABLE SCRAPS.

This is a good act to complete as an entire class. Find out if your school administration or school division is supportive of composting (indoor, outdoor or both). It will be difficult to proceed without an established composting facility at your school. If your school has a composting program, take advantage of it! If not, find out more about setting up a vermicomposter in your classroom or a composter on your school grounds by downloading the following publications:

- Vermicomposting:
www.environment.gov.ab.ca/info/library/8078.pdf
- Backyard composting:
www.environment.gov.ab.ca/info/library/8077.pdf

Vocabulary

• Compost, composting, vermicomposting

Before the students proceed with the Draw It! section, you may want to spend time discussing these words and building word meaning. Use the “Introduction to Waste and Waste Reduction” lesson plan or the publications listed above for great definitions.

Draw It!

In the Draw It! section, students are asked to draw suitable and unsuitable items to put into the composter. Regardless of your style of composting (vermicomposting or outdoor composting), here is a general list of good and bad items to include in your composter:

Good

- Fruit and vegetable materials such as apple cores, banana peels, orange peel, pear cores, grape stems, carrot tops, uneaten vegetables
- Coffee grounds and filters
- Egg shells
- Tea and tea bags
- Dried leaves
- Clean, shredded newspaper and white paper

Bad

- Meat, bones and fish
- Bread, pasta, noodles, cereals, granola bars
- Oils, salad dressings, cheese
- Candy
- Pet waste, pet bedding
- Dirty, paint-covered newspaper or white paper

Create a master list of “good” and “bad” compostable items to post in the classroom next to a compost collection bucket. A collection bucket can be a 2-litre ice cream pail with a lid or similar container. A lid is a good idea; it helps to keep bugs away and curious fingers out.

Do It!

Ask students to make a list of why it is important to compost. This exercise builds an understanding of what happens to our organic waste. The composting and vermicomposting publications listed above offer great ideas on why composting is important. Here are some ideas to help with idea generation in your class:

- Make less garbage
- Use fewer garbage bags
- Make a home for bugs, worms and insects
- Create plant food (when compost is ready, it can be used as a nutrient rich food on plants)
- Save money (when we make less waste - fewer garbage bags, less garbage trucks, etc.)
- Turn our garbage into something useful
- Save energy (we don't need as many garbage trucks to pick up our garbage)

Commit to Act

- Commitment cards
- Commitment poster

Action

Students and teachers spend the commitment period composting their fruits and vegetable scraps. Rubber gloves and aprons may be good items to have at your compost collection station. If you have access to a scale, you can keep track of your compostable items by weight. You may establish certain composting jobs such as:

- Compost Patrol - these students make sure that all compostable items are added to the compost collection bucket during lunch.
- Compost Caretakers - these students are responsible for adding the contents of the compost collection bucket to the main composter. They may also be responsible for turning the compost or making sure the new scraps are properly buried in the composter. Working with teachers the compost could be used as a fundraiser.

Done!

Students can use the check boxes (or place stickers) to track their progress (self-evaluation) through the commitment period. This Done! list is meant to help illustrate success to the students while they complete their simple acts.

Background Information**Why Act?**

- One third of all the waste that goes to the landfill is suitable for a backyard composter. The material obtained from your composter can be used on your lawn and in your garden. It helps retain water and serves as a natural fertilizer. No more need to buy chemical fertilizers!
- If you live in an apartment or condo, you can compost with worms. This is known as vermicomposting.
- Organic materials that decompose in landfills can produce methane gas, often called landfill gas. Methane is 21 times more potent than carbon dioxide as a greenhouse gas.
- If Albertans diverted food scraps to composting there would be a net carbon dioxide savings of 237,690 tonnes per year.

Your Impact

- 150 grams of food scraps per student per day diverted from landfill
- 30 kilograms of waste per student per school year diverted from landfill
- 156 kilograms of waste per family of four per year diverted from landfill
- Food scraps can be composted and used as a fertilizer and soil conditioner.

Sources & Websites

Waste Facts: A Companion Document for Too Good to Waste
www.environment.gov.ab.ca/info/library/7823.pdf

Waste Reduction Week Canada, Facts and Quotables
www.wrwcanda.com/download_facts.htm

Earth Care Canada, How Long Until Dirt Lesson Plan
www.earthcarecanada.com/EarthCare_Program/lessons/HowLongUntilDirt_Wa.asp

Evergreen Canada, Gardening and Composting Lesson Plans
www.evergreen.ca/en/lg/plans_listing.html



5 I WILL BE A WATER SAVER!

Draw It!

In the Draw It! section, students are asked to draw a picture of all the things that need fresh water to drink or grow. The students can draw anything here - be sure to include plants, animals and people. A discussion can follow about the importance of water for all living things. Everything on our planet, whether a cactus in the desert or a fish in a lake, requires water to survive. That means we all need to conserve the precious water we have!

Do It!

With your students, make a list of all the ways that the students can be water savers at school. These may include:

- Bring in your own refillable bottle for water.
- Turn off the tap while soaping up your hands.
- At the water fountain, let go of the button when you have had enough water.
- Put water into cups for cleaning paint brushes during art class.
- Keep a lid on aquaria to prevent evaporation of water.
- Collect water from water bottles at the end of the school day. Save it for watering school or classroom plants.
- Don't use the toilet as a garbage can - only flush human waste and toilet paper.

Some ideas here may not fit in with the culture of your school. For example, if beverages are not allowed in the classroom, be sure to indicate that students should bring their own bottles for lunch hour.

Commit to Act

- Commitment cards
- Commitment poster

Action

Students and teachers spend the commitment period being water savers. To help students understand the amount of water on our planet is to shrink the volume of water on Earth to a "student-sized" measurement, such as a 4-litre milk jug or a 2-litre pop bottle. Check out www.niagarachildrenswaterfestival.com/index/page/name/learning and click on water conservation.

Done!

Students can use the check boxes (or place stickers) to track their progress (self-evaluation) through the commitment period. This Done! list is meant to help illustrate success to the students while they complete their simple acts.

Background Information

Why Act?

Using the school water fountain can waste water unnecessarily. Fill a reusable water bottle and save litres of water every time you need a drink. It takes time to soap up your hands when washing. The average bathroom or kitchen tap has a flow rate of 15-26 litres per minute. By turning off the tap while soaping your hands, you can save a lot of water.

Your Impact

- If each student turned off the taps while they soaped up their hands, they could save 12.5 litres of water per day or 250 litres in one school year.
- On average, Canadians use 329 litres of water per person per day. We are the second highest consumers of water in the developed world (the United States is the highest water consumer). Europeans consume less than half of the water we do with a similar standard of living.

Sources & Websites

City of Calgary Water Services
www.calgary.ca/portal/server.pt/gateway/PTARGS_0_0_780_237_0_43/http%3B/content.calgary.ca/CCA/City+Hall/Business+Units/Water+Services/Water+Services.htm

Water use calculator and conservation tips
www.on.ec.gc.ca/reseau/watertips/watertips_e.html

Eco Kids - Water Conservation Around the House
ecokids.ca/pub/eco_info/topics/water/water/index.cfm

Flex Your Power
www.fypower.org/res/tools/products_results.html?id=100160

Unilever GO BLUE Campaign
www.water-matters.org/program/go-blue

Division 2

Acts for Grades 4 - 6

Students in grades 4 - 6 may want to select their own simple act and their own commitment period. It is a good idea to select your commitment period in advance. Be sure that they develop a method to record their days, weeks or months of action. Your students can enter their data directly into the Impact Calculator as well. You may also select simple acts found in the grade 1 - 3 section and modify the activities to suit your class.

One Simple Act will make a big impact!

I will turn off the tap while I soap up my hands.



Why?
On average, Canadians use 343 litres of water per person per day! Find out:
How many 2-litre pop bottles is that? Show your work.

How many 4-litre milk jugs is that? Show your work.

Whoa!
If I save two litres of water every day, I will be saving:
_____ litres of water in one week!
_____ litres of water in one month!
_____ litres of water in one year!
I think it is important to save water because:
1. _____
2. _____

Wow!
 I turned off the tap while I soaped my hands for one week!
 I turned off the tap while I soaped my hands for one month!
 I reminded another student to turn off the tap!
 I reminded my family to turn off the tap!
Other things I did to save water:

www.onesimpleact.alberta.ca

Government of Alberta

1 I WILL TURN OFF THE TAP WHILE I SOAP UP MY HANDS.

Why?

In the Why! section, students are asked to use their math skills to create a meaningful number of our water use. On average, Canadians use 329 litres of water per person per day! This number is quite abstract and may be hard to visualize. By turning that volume into 171.5 pop bottles or almost 86 milk jugs, the students can “see” the large volume of water that Canadians use per person each day. Have the students collect 86 milk jugs and create a display for the school, showing our water consumption.

Whoa!

The activity in Whoa! asks the students to see how much water they can save over a period of time. The act of turning off the taps while soaping your hands may appear to save such a small amount of water. In reality, it can turn out to be quite a bit of water savings, as this activity illustrates.

Extend the activity by determining your actual water savings by measuring the flow rate from the bathroom taps. Use a stopwatch and a small bucket to calculate the volume of water that flows from the taps in 10 seconds. Using a measuring cup to calculate how much water came out of the tap, multiply that number by 6 to get the volume of water in one minute. Then, have the students time their next hand washing (leaving the water on while they soap their hands). How many litres of water did it take to wash their hands? How many litres of water can be saved by turning off the taps during hand soaping?

Commit to Act

- Commitment cards
- Commitment poster

Action

Students spend the commitment period turning off the taps while they soap their hands. They can also determine other ways of saving water while at school and then at home.

Wow!

Students can use the check boxes (or place stickers) to track their progress (self-evaluation) through the commitment period. This Wow! list is meant to help illustrate success to the students while they complete their simple acts.

Background Information

Why Act?

It takes time to soap up your hands when washing. The average bathroom or kitchen tap has a flow rate of 15-26 litres per minute. By turning off the tap while soaping your hands, you can save a lot of water.

Your Impact

- If each student turned off the taps while they soaped up their hands, they could save 12.5 litres of water per day or 250 litres in one school year.
- On average, Canadians use 329 litres of water per person per day, almost twice as much as people in many developing countries.

Sources & Websites

City of Calgary Water Services
www.calgary.ca/portal/server.pt/gateway/PTARGS_0_0_780_237_0_43/http%3B/content.calgary.ca/CCA/City+Hall/Business+Units/Water+Services/Water+Services.htm

Water use calculator and conservation tips :
www.on.ec.gc.ca/reseau/watertips/watertips_e.html

Eco Kids - Water Conservation Around the House
ecokids.ca/pub/eco_info/topics/water/water/index.cfm

Flex Your Power
www.fypower.org/res/tools/products_results.html?id=100160

Unilever GO BLUE Campaign
www.water-matters.org/program/go-blue



2 I WILL PACK A WASTE-FREE LUNCH.

Why?

In the Why! section, students are asked to use their math skills to calculate the amount of waste that could be saved by their classroom. Looking at the waste saved in one classroom can be much more impactful than considering one student's waste alone. If your students are working on metric unit conversion, have them convert their number from grams to kilograms. You can also have your students calculate the amount of waste saved in one year.

Whoa!

The activity in Whoa! asks the students to list waste-free lunch ideas. Here are a few more to help your students get started:

- Bring a reusable bottle.
- Bring a reusable spoon.
- Save mini yogurt containers for art class.
- Ask parents to buy a big yogurt or make a family-size pudding and pack them in lunch-size containers.
- Bring sandwiches, soup and pasta in reusable containers.
- Say “no” to pre-packaged lunches.
- Compost apple cores and banana peels at home or at school.

- Bring homemade cookies in reusable containers.
- Bring reusable napkins in your lunch kit
- Invest in a reusable lunch kit instead of paper or plastic bags.

You can create a master list of waste-free lunch ideas that can be posted in the classroom as a reminder. Many of these ideas require some cooperation from parents. Before committing to this simple act, you may consider sending home a note to parents and telling them that the students will be working on making their lunches waste-free. Make sure students write down waste-free lunch ideas they would like to try with their families.

Be sure to encourage students who may have some waste in their lunch to try something new to reduce waste. It is hard to go totally waste-free after having some waste. Some of their favourite lunch items have wrappers – like granola bars. Ask students if there is an alternative, like making homemade granola bars, or by recycling containers. Going 100 per cent waste-free may be difficult, but encourage the students to go as far as possible.

Commit to Act

- Commitment cards
- Commitment poster

Action

Students spend the commitment period packing a waste-free lunch. Teachers, TA's and other regulars in the classroom can show their support by going waste-free as well. During the commitment period, your students could be rewarded by being allowed to eat lunch in the classroom (if that is not your current lunch routine), by eating their snacks during class time, or by having a reusable water bottle at their desks.

Wow!

Students can use the check boxes (or place stickers) to track their progress (self-evaluation) through the commitment period. This Wow! list is meant to help illustrate success to the students while they complete their simple acts.

Background Information

Why Act?

Reduce the amount of waste that your school produces! Many of the things we pack for lunch have a lot of waste once we have eaten all the food. By making wiser lunch time choices and reusing packable food and drink containers, we can not only reduce the amount we waste but generally have healthier lunches!

Your Impact

- A student can divert about 170 grams of waste in one day by packing a waste-free lunch which is 34 kilograms of waste per school year. Multiply that by the number of students in your school and the impact is huge!

Sources & Websites

Waste Facts: A Companion Document for Too Good to Waste
www.environment.gov.ab.ca/info/library/7823.pdf

Waste Reduction Week Canada, Facts and Quotables
www.wrwcanada.com/download_facts.htm

Triple Stars Waste Reduction Challenge
www.recycle.ab.ca/images/stories/2008triplestars.pdf

Information on Waste Reduction Week in Canada
www.recycle.ab.ca/wrw

New York State Litter-less lunch program (USA)
www.dec.ny.gov/docs/materials_minerals_pdf/lunch.pdf

3 I WILL USE ACTIVE OR GREEN TRANSPORTATION AT LEAST ONCE A WEEK.

Vocabulary

- **Active transportation, green transportation**

Ask students what they think these words may mean. They probably have the right answers. According to the Public Health Agency of Canada, “active transportation” is any form of human-powered transportation. It is any trip made for the purposes of getting yourself, or others, to a particular destination – to work, to school, to the store or to visit friends. As long as it is “active”, you can choose the mode – walking, cycling, wheeling, in-line skating, skateboarding. Walking and cycling are the most popular forms of active transportation. It can also involve combining modes such as walking/cycling with public transit.”

Green transportation includes taking the bus, carpooling and traveling in fuel-efficient vehicles, such as hybrids.

Why?

In the Why! section, students are asked to list different forms of active and green transportation. Then students are asked to list three reasons why active or green transportation is a good idea. Here is a list to give them some ideas:

- Reduce air pollution
- Improve our health and fitness level
- Reduce neighbourhood noise
- Reduce traffic congestion
- Reduce climate change – by avoiding the emission of greenhouse gases from vehicle tail pipes
- Make neighbourhoods safer – fewer vehicles on the road
- Save money, by not purchasing as much gasoline

Students could expand on their favourite reason and write in more detail on why that is the most important reason to consider active and green transportation.

Whoa!

The activity in Whoa! gets students to figure out how much greenhouse gas (or pollution) could be prevented from entering the atmosphere if the students chose active and green transportation. We have figured out the carbon dioxide (CO₂) emissions in 1 km from an average-sized vehicle in Canada using gasoline fuel. Students can find out their distance from home to school using websites like Google Maps, Map Quest or MapMyWalk.com. Once they have calculated their round-trip distance, students can multiply that number by 0.3 kg of CO₂ per km to determine the amount of emissions that would be produced by driving that distance. If students live quite close to school, use 300 g of CO₂ instead, so that students don't get decimal values for their emissions.

Commit to Act

- Commitment cards
- Commitment poster

Action

Students spend the commitment period taking active and green transportation modes. Not all modes of transportation will be possible in all communities. Select the ones that make the most sense for your students. Encourage students to try something new. If many students in your school carpool to school, ask them to try a walking pool (with one parent if required). Post or create a map of your school and surrounding neighbourhood. Mark good walking/cycling routes in green, and mark busy or unsafe routes in red.

Wow!

Students can use the check boxes (or place stickers) to track their progress (self-evaluation) through the commitment period. This Wow! list is meant to help illustrate success to the students while they complete their simple acts.

Background Information

Why Act?

One litre of gasoline produces about 2.4 kilograms of carbon dioxide during combustion. Carbon dioxide emissions are a major contributor to climate change. According to the Public Health Agency of Canada, each Canadian makes an average of 2,000 car trips of less than 3 kilometres each year, trips that could be replaced with an active choice of transportation for all or part of the trip.

Your Impact

- One 2 kilometre round-trip in a mid-sized vehicle emits about 600 grams of carbon dioxide into the atmosphere.
- By eliminating one 2 kilometre round-trip each week your students will prevent 24 kilograms of carbon dioxide from entering the atmosphere every school year.

Sources & Websites

Active and Safe Routes to School Program
www.resourceconservation.mb.ca/gci/ASRTS/1main.html

Public Health Agency of Canada,
 Healthy Living Unit
www.phac-aspc.gc.ca/pau-uap/fitness/active_trans.htm

Healthy U: Active Transportation
www.healthyalberta.com/HealthyPlaces/619.htm

Walking School Bus
www.walkingschoolbus.org

4 I WILL TURN OFF THE COMPUTER AND OTHER ELECTRONICS WHEN I AM NOT USING THEM.

Why?

In the Why! section, students are asked to do some myth busting:

Myth or Fact?

- Computers and printers use electricity even when they are not in use.
FACT! Computers and related components use electricity even when they are not in use. If your electronics cord has a black power box at the plug end or along the cord it uses power while plugged into the outlet, even when turned off. You could call these appliances “power vampires!”
- A power bar can help to save energy.
FACT! Many modern electronics including cell phones, printers, TVs, cordless phones and video games use standby power even when turned off. Plug your electronics and computers into a power bar that can be shut off, to avoid wasting electricity with the standby power feature.

- The screen saver is a good energy saver.
MYTH! The screen saver does not equal energy saver. It is best to turn the monitor all together. According to the EnergySTAR Program, “screen savers generally do not save energy. In fact, certain graphics-intensive screen savers can cause the computer to burn twice as much energy, and may actually prevent a computer from entering sleep mode.”
- If I turn off the monitor, that is good enough.
MYTH! 60 percent of the electricity used by a computer comes from the monitor. The other 40 percent is used to keep the hard drive spinning and to work the electronics. Less energy is consumed when computers and monitors are turned on and off (as often as required) than when left on over time. In fact, all electronic devices use more energy when left on, as opposed to being turned on and off as needed.
- My electronics use batteries so I can leave it on as long as I want – that’s not wasting energy.
MYTH! Most batteries that run our cameras, hand-held video games and cell phones are discarded in the trash when they need to be replaced. All those batteries collecting in the land-fields are not good for the environment. Try using rechargeable batteries whenever possible. Rechargeable batteries still require electricity to recharge – turn all electronics off when not in use to save energy. Turn in recyclable batteries for recycling when they no longer hold a charge.

Whoa!

The activity in Whoa! asks students to work on a project related to saving energy:

1. Make a list of all the electronics that you use in your school. It could be a computer, printer, CD player or fan.
2. Write a message about turning off your computer for the school morning announcements. What should your message say?
3. Make a poster for the computer lab. Remember to tell other students why it is important to turn off your computer.
4. Write a letter to your family about why it is important to turn your computer off at home.
5. Research “power vampires” and tell your class about your results.
6. Find out how electricity is created in your community. Is it coal, oil, wind power or hydroelectric? Is there pollution created when we create electricity?

We have suggested that the students select two of these projects to work on. You can select the number that suits your class best. Students can then present their finished product or their research findings.

Commit to Act

- Commitment cards
- Commitment poster

Action

Students spend the commitment period turning off computers and other electronics when not in use. Encourage students to think of other ways to save energy at school, such as turning off lights when not required.

Wow!

Students can use the check boxes (or place stickers) to track their progress (self-evaluation) through the commitment period. This Wow! list is meant to help illustrate success to the students while they complete their simple acts.

Background Information

Why Act?

Computers and related components use electricity even when they are not in use. Plug each computer component into a power bar that can be shut off, to avoid wasting electricity with the 'standby' power feature.

Your Impact

- If computers and other electronics were turned off about 2 hours more each day, students would be responsible for a 100 gram CO₂ savings per day or 2 kilograms of CO₂ in a school year.
- Sixty percent of the electricity used by a computer comes from the monitor. The other 40 percent is used to keep the hard drive spinning and to work the electronics.
- Less energy is consumed when computers and monitors are turned on and off (as often as required) than when left on over time. In fact, all electronic devices use more energy when left on, as opposed to being turned on and off as needed.
- The screen saver does not mean energy saver; it is best to turn the monitor off.

Sources & Websites

Unplugging - the Ultimate Power Smart Strategy
www.hydro.mb.ca/your_home/ask_an_energy_expert/unplugging.shtml

BC Hydro - Turn It off
www.bchydro.com/guides_tips/green-your-home/electronics_guide/turn_it_off.html



5 I WILL REMIND MY PARENTS AND OTHER DRIVERS TO BE IDLE-FREE IN THE SCHOOL ZONE.

Why?

In the Why! section, students are asked to write down six (or more) words to describe the look and smell of vehicle exhaust. Then, students can use the words to write a paragraph or a short story.

Your students can use the sentence started as listed or you can have them write their own paragraph from the beginning.

Whoa!

The activity in Whoa! asks students to create a mini-poster that could be handed out to parents or other drivers at your school. Mini-posters can be made by re-using half an 8.5" x 11" sheet of paper. This is a good size that gets your message out and is easy to carry and distribute. Perhaps students can make posters that can be photocopied (make them on the computer or using dark markers and pens). Then, they can hand out multiple versions of the same poster.

We have included some anti-idling phrases, but feel free to use your own or have your students brainstorm other ideas. It is a good idea to be positive with your messages, (e.g.: “Be Idle-free” rather than, “Stop Idling”). Often, idlers can become defensive when they receive a message that “scolds” their behavior. We have found that positive words and encouragement go a lot further.

Before committing to this simple act, you may consider sending home a note to parents and telling them that the students will be conducting an idle-free campaign.

Commit to Act

- Commitment cards
- Commitment poster

Action

Students spend the commitment period reminding parents and other drivers to be idle-free in the school zone. Be sure to talk to students about vehicle safety in the school zone. If you are having your students go out to the drop-off area in the morning, be sure they are wearing safety vest (use the safety patrol vests) and are observing all vehicles carefully.

Wow!

Students can use the check boxes (or place stickers) to track their progress (self-evaluation) through the commitment period. This Wow! list is meant to help illustrate success to the students while they complete their simple acts.

Background Information

Why Act?

Ten seconds of idling uses more fuel than restarting your car. Save money, save gas and reduce local air pollution by reducing idling.

Your Impact

- If each student encouraged one driver to reduce idling by 1 minute each day, they would be responsible for a CO₂ savings of 56 grams each day or 11.2 kilograms each school year.
- Ten seconds of idling uses more fuel than restarting your car.
- Every ten minutes of unnecessary idling equals a quarter of a litre of wasted fuel.
- If Canadians reduced their idling by three minutes a day, collectively they would save \$630 million/ year in fuel costs, the equivalent of taking 320,000 vehicles off the road.

Sources & Websites

Alberta Motor Association: Use less, save more.
www.ama.ab.ca/cps/rde/xchg/ama/web/advocacy_safety_EnvironmentalChecklist-11826.htm?link=txt

Natural Resources Canada: Idling Calculator
www.oeenrncan.gc.ca/transportation/tools/calculators/Idling/idlingimpact-general.cfm?attr=8

Idling Gets you Nowhere
www.oeenrncan.gc.ca/publications/infosource/pub/fleetsmart/publications_idling.cfm?attr=12