



ENERGY CAMPAIGN

SAVE ENERGY! BINGO

Adapted from a **25 Acts** of Energy Conservation school campaign that resulted in over 900 energy saving acts*, this resource includes a variety of bingo cards, a slide presentation, announcements, and newsletter items that can be used in your school to reduce energy, water, and waste.

- Take action to save energy, water, and waste at school, home, or in your community.
- Calculate greenhouse gas emissions

Background

There are many actions students can take to reduce greenhouse gas emissions at school, at home, or in the community. We can take action in two ways:

- Changing our **behaviour**, or the habits of how we use energy and water and produce waste. For example, turning out lights when we leave a room.
- Changing **technology**, or the stuff we use to save energy and water and reduce waste. For example, replacing old lighting with energy efficient LED light bulbs.

Procedure

Planning your Energy Saving Bingo:

Three Save Energy! Bingo cards are provided and can be mixed and matched to focus specifically on an area like electricity, or water, or waste, or combine them all.

The idea is to have participants do as many conservation actions as possible in the time frame. They can fill more than one card; or keep track of how many times they did one or more actions on the same card.

1. Choose the bingo cards or actions that you want to focus on and print cards. The back of each card provides some ways to use the card.
 - #1, do the actions that spell "save", "water" or "waste". Try to get a blackout, or do as many actions as possible in the time frame, or
 - #2, do the actions and find out how much money you are saving, or
 - #3, do the actions and calculate how much energy, or water, or waste, and greenhouse gas emissions you are reducing. Note – savings are based on assuming that the action is done a certain number of times.
 - #4, use the blank template to make your own card, and/or mix and match the actions provided in the other cards.
2. Choose your action time frame – one week, one month, etc.
3. Print and distribute cards to participating students, class, school, or school families.



4. Tell people what they need to do. Make posters, presentations, and/or use the announcements (page 6) and slide show attached to promote your **Save Energy!** Bingo.
5. Do you want to give prizes? Argyle Elementary School collected prizes from local businesses and included random draws for acts of energy conservation.

***25 Acts of Energy Conservation school campaign**

Gators Go Green, Argyle Elementary School, Regina:

Summary: Our classroom got the whole school community involved in the 25 Acts of Energy Conservation contest by creating a BINGO card with 25 squares. Each square was an energy conservation act. Every time a student completed an act they got to cross off the act from the card. For every line they completed on the card they got their name entered into a prize draw. As well, if they tweeted out a picture with the #25acts they received an additional entry. The prize package was filled with gifts donated from various environmentally friendly businesses. We created a power point explaining the contest and each classroom had designated students in charge of giving the mini lesson on the BINGO card and why this contest is important for our environment. Using a BINGO card of actions approach allowed us to reach quite a few people, not only in our school but in the surrounding community. There were 943 acts of energy conservation performed by our school community, 209 acts tweeted out, and we averaged 5 acts per family.

The Gators Go Green Bingo Card is on page 3.

25 Acts of Energy Conservation was a contest offered by SES in partnership with the Saskatchewan Science Centre, and was sponsored by SaskEnergy, The Co-operators, and SARCAN.

A related action project:

A woman in Ontario added a conservation action to her life, every day for a year. Her rule was that once she had added the action, she continued to do it every day. For example, on one day, her action was to bring a reusable mug to the coffee shop. Her challenge to herself was to continue to bring a reusable mug each time she visited a coffee shop after that day, and not go back to using a disposable cup.

Over 365 days, she added 365 conservation actions to her life.

Challenging students to continue to do the Save Energy! Bingo actions each day will lead to greater greenhouse gas emission savings.



Gators Go Green Bingo Card

Please cross out each act of energy conservation as you complete them. Fill out the back of the sheet and return to your teacher by Monday March 23, 2015. See backside for rules, prize package information and how to receive additional draw entries.

Rules


For each diagonal, vertical, or horizontal line your family completes you will get your name entered into the prize draw. If you get a black out your family's name will be entered into the draw 15 times!!! As well, if you take a picture of your family completing one of the acts of energy conservation and tweet it to @argyleschoolsk with the hashtag #25acts you will get an additional entry into the prize draw for each picture you tweet.

ALL ENTRIES/TWEETS MUST BE IN BY MONDAY, MARCH 23 BY 3:30PM

Number of lines completed: _____

Number of photos tweeted: _____

Prize package will be drawn on Wednesday, March 25, and can be picked up on Thursday, March 26th, from the office during 3 way conferences.

#25	A	C	T	S
Use reusable grocery bags	Take a 4 minute shower	Go for a walk on an evening	Ride a bicycle to work or school	An electronic free evening
Turn down your water heater temperature	Hang up clothes to dry	Turn off lights when not in use	Include an organic food as part of your supper	Use a programmable thermostat
No screen time family night	Run your dishwasher only when it is full or hand wash dishes		Turn off taps when brushing teeth	Car pool or use public transportation
Walk to a destination	Replace your furnace filter	Prepare a supper without using your oven/stove	Switch to energy efficient light bulbs	Use a reusable water bottle
Cover any drafty doors or windows with weather stripping	Use the Blue recycling bin at your house	Unplug phone chargers when not in use	Wash your clothes with cold water	Bring a litter less lunch to school

E	N	E	R	G	Y
Use reusable grocery bags S	Take a 5-minute shower W	Go for a walk on an evening S	Ride a bicycle to school or work A	Have an electronic-free evening V	I saved energy by... E
Hang up clothes to dry A	Turn off an idling vehicle	Run your dishwasher only when it is full A	Turn down the heat	Turn down your water heater temperature	Have a meatless meal
No screen time family night V	Carpool or use public transportation	Walk to a destination	I saved water by... T	Prepare supper without using your oven/ stove/ microwave	Switch to energy efficient light bulbs
Turn off lights when not in use E	Replace weather stripping around drafty doors and windows	Put recyclables in the blue recycling bin at your house	Unplug phone chargers when not in use	Wash your clothes in cold water E	Replace your furnace filter
Make your own granola bars and snacks W	No single use plastics for 2 days! A	Bring a garbage free lunch to school S	Use a reusable water bottle T	I reduced waste by... E	Turn off taps when brushing teeth R

#1

Ways to use this bingo card:

Give students/families a card.

Set a time period for the challenge, like a week, or a month.

- Try to get a black out – do every activity to fill the whole card,
- Do all the activities in a line that spells these words - “Save”, “Water”, or “Waste”, or
- Do activities more than once. Just keep adding check marks (✓) to the box every time you do the activity. At the end of the time period, count up all the activities you did.

\$ E \$	\$ N \$	\$ E \$	\$ R \$	\$ G \$	\$ Y \$
<p>We Take Shorter Showers Saved \$10/month <i>when 1 person reduces showering time from 15 to 5 minutes/day.</i></p>	<p>Switched our 5 most used Lights to LED Saved \$8/month <i>by switching 60W incandescent lamps to LED.</i></p>	<p>My Family Replaces one meal of Beef with Three Sisters Soup Saved \$22/month <i>Saved based on 1 meal/week and 0.5 kg of beef or beans.</i></p>	<p>I Bike to School Saved \$4/month <i>Saved 45 litres of gas/year, compared to driving to school.</i></p>	<p>20 Parents Quit Idling at Our School Saved \$58/month <i>Saved 600 litres of gas/year, compared to each vehicle idling 10 minutes/day.</i></p>	<p>We Recycle Drink Containers at SARCAN Saved \$5/month <i>Saved 472 kg of waste/year based on 6 containers each week.</i></p>
<p>I Walk to School Saved \$4/month <i>Saved 45 litres of gas/year, compared to driving to school.</i></p>	<p>We Close the Blinds at Night to Keep the Heat In Saved \$2/month <i>Saved 3 GJ/year.</i></p>	<p>I Turn the Heat Down When No One is Home Saved \$2/month <i>Saved 4 GJ/year, by programming our thermostat to turn the heat down 3°C during the day.</i></p>	<p>We Wash Our Clothes in Cold Water Saved \$1/month <i>Saved 1 GJ/year.</i></p>	<p>We Installed a Low Flow Showerhead Saved \$11/month <i>Saved 30,000 litres of water/year, by switching to a 6 litre/minute showerhead.</i></p>	<p>Switched my whole house to LED lights Saved \$43/month <i>Saved 3000 kWh/year, compared to using incandescent lights for the same time period</i></p>
<p>We Use Refillable Water Bottles Saved \$32/month <i>Saved 416 bottles/year by using tap water.</i></p>	<p>I Set up Sleep Settings on My Computer Saved \$2/month <i>Save 130 kWh/year, compared to leaving them on for 10 hours/day.</i></p>	<p>We Turn Out Lights When Not Needed Saved \$14/month <i>Saved 1000 kWh/year by turning lights off an extra 2 hours /day.</i></p>	<p>I Switched to a Laptop Computer Saved \$2/month <i>Saved 160 kWh/year, compared to using a desktop computer.</i></p>	<p>We Added Insulation in our Attic Saved \$50/month <i>Saved 99 GJ/year.</i></p>	<p>We Play Board Games once a week Saved \$1/month <i>Saved 70 kWh/year, by turning off TV and game systems one evening per week.</i></p>
<p>Told a Neighbour how we Saved Energy by Turning out Lights They saved \$14/month <i>They save 1000kWh/year by turning lights off an extra 2 hours /day.</i></p>	<p>We Sealed Drafts Around our Windows and Doors Saved \$4/month <i>Saved 7 GJ/year by reducing drafts 10%.</i></p>	<p>I Fixed a Leaking Toilet Saved \$21/month <i>Save 73,000 litres of water/year, based on 200 Litres/day leaking.</i></p>	<p>My Family Lets the Dishes Air Dry Saved \$6/month <i>Save 440 kWh/year, compared to using the heat dry cycle on the dishwasher.</i></p>	<p>My Family Planted Drought Tolerant Plants Saved \$14/month <i>Save 48,000 litres of water/year, by not watering a 10m by 10m area.</i></p>	<p>We Recycle Paper, Plastic, and Metal Saved There is less in our garbage can! <i>Saved 73 kg of waste/year, compared to throwing recycling in the garbage.</i></p>
<p>I Turn the Heat Down at Night Saved \$4/month <i>Saved 7 GJ/year, by turning the heat down 5°C overnight.</i></p>	<p>Our City Added Bike Paths in my Neighbourhood Saved My street is safe and quiet! <i>On weekends my family rides to the farmer's market and parks.</i></p>	<p>My Family Started Composting at Home Saved <i>Saved 376 kg of waste/year, compared to throwing our organic waste in the garbage.</i></p>	<p>My Family Hangs Clothes to Dry Saved \$13/month <i>Saved 880 kWh/year, compared to using an electric dryer.</i></p>	<p>Using Power Bars, we cut our Phantom Load in Half Saved \$5/month <i>Saved 350 kWh/year, by using power bars.</i></p>	<p>Our School Turns Off Lights When Not Needed Saved \$88/month <i>Saved 8800 kWh/year, compared to using T8 fluorescent lighting an extra 4 hours per day.</i></p>

2

Ways to use this bingo card: Save Energy Bingo \$ savings (these are based on Saskatchewan utility costs)

Give students/families a card.

Set a time period for the challenge, like a week, or a month.

- Choose an activity that requires a **technology** change (the stuff we use that saves energy) and do it – E.g. **Switched our 5 most used lights to LED**. Calculate how much money you will save each month from making that change.
- Choose an activity that requires a **behaviour** change (the things we do that save energy) and do it for the whole time period of the challenge – E.g. **My family hangs clothes to dry**. Calculate how much money you saved from making that change. (If the length of your challenge was a week, divide the amount of money by 4, to find your weekly saving.)
- Choose as many activities as you can and do them for the whole length of the challenge time. Calculate the amount of money you saved by making these *technology* or *behaviour* changes.

Note: the following are measured in this way;

- Energy in kilowatt hours per year (kWh/yr)
- Water in litres per year (L/yr)
- Waste in kilograms per year (kg/yr)
- Greenhouse gas emissions in kilograms of carbon dioxide equivalent per year (kgCO_{2e}/yr) Greenhouse gas emissions are based on how energy is generated in Saskatchewan.

E	N	E	R	G	Y
<p>I Take Shorter Showers Saved 20kgCO_{2e}/year Save 33,000 litres of water/year, by reducing showering time from 15 to 5 minutes/day.</p>	<p>Switched our 5 most used Lights to LED Saved 340 kgCO_{2e}/year Saved 558 kWh/year by switching 60W incandescent lamps to LED.</p>	<p>My Family Replaces one meal of Beef with Three Sisters Soup Saved 650 kgCO_{2e}/year Saved based on 1 meal/week and 0.5 kg of beef or beans.</p>	<p>I Bike to School Saved 110 kgCO_{2e}/year Saved 45 litres of gas/year, compared to driving to school.</p>	<p>20 Parents Quit Idling at Our School Saved 1400 kgCO_{2e}/year Saved 600 litres of gas/year, compared to each vehicle idling 10 minutes/day.</p>	<p>We Recycle Drink Containers at SARCAN Saved 810 kgCO_{2e}/year Saved 472 kg of waste/year based on 6 containers each week.</p>
<p>I Walk to School Saved 110 kgCO_{2e}/year Saved 45 litres of gas/year, compared to driving to school.</p>	<p>We Close the Blinds at Night to Keep the Heat In Saved 150 kgCO_{2e}/year Saved 3 GJ/year.</p>	<p>I Turn the Heat Down When No One is Home Saved 220 kgCO_{2e}/year Saved 4 GJ/year, by turning the heat down 3°C during the day.</p>	<p>We Wash Our Clothes in Cold Water Saved 60 kgCO_{2e}/year Saved 1 GJ/year.</p>	<p>We Installed a Low Flow Showerhead Saved 20 kgCO_{2e}/year Saved 30,000 litres of water/year, by switching to a 6 litre/minute showerhead.</p>	<p>Switched my whole house to LED lights Saved 1800 kgCO_{2e}/year Saved 3000 kWh/year, compared to using incandescent lights for the same time period</p>
<p>We Use Refillable Water Bottles Saved 30 kgCO_{2e}/year Saved 416 bottles/year by using tap water.</p>	<p>I Set up Sleep Settings on My Computer Saved 80 kgCO_{2e}/year Save 130 kWh/year, compared to leaving it on for 10 hours/day.</p>	<p>We Turn Out Lights When Not Needed Saved 600 kgCO_{2e}/year Saved 1000 kWh/year by turning lights off an extra 2 hours/day.</p>	<p>I Switched to a Laptop Computer Saved 90 kgCO_{2e}/year Saved 160 kWh/year, compared to using a desktop computer.</p>	<p>We Added Insulation in our Attic Saved 4940 kgCO_{2e}/year Saved 99 GJ/year.</p>	<p>We Play Board Games once a week Saved 40 kgCO_{2e}/year Saved 70 kWh/year, by turning off TV and game systems one evening per week.</p>
<p>Told a Neighbour how we Saved Energy by Turning out Lights They saved 600 kgCO_{2e}/year They save 1000kWh/year by turning lights off an extra 2 hours /day.</p>	<p>We Sealed Drafts Around our Windows and Doors Saved 370 kgCO_{2e}/year Saved 7 GJ/year by reducing drafts 10%.</p>	<p>I Fixed a Leaking Toilet Saved 40 kgCO_{2e}/year Save 73,000 litres of water/year, based on 200 Litres/day leaking.</p>	<p>My Family Lets the Dishes Air Dry Saved 260 kgCO_{2e}/year Save 440 kWh/year, compared to using the heat dry cycle on the dishwasher</p>	<p>My Family Planted Drought Tolerant Plants Saved 30 kgCO_{2e}/year Save 48,000 litres of water/year, by not watering a 10m by 10m area.</p>	<p>We Recycle Paper, Plastic, and Metal Saved 79 kgCO_{2e}/year Saved 73 kg of waste/year, compared to throwing recycling in the garbage.</p>
<p>I Turn the Heat Down at Night Saved 370 kgCO_{2e}/year Saved 7 GJ/year, by turning the heat down 5°C overnight.</p>	<p>Our City Added Bike Paths in my Neighbourhood Saved Now I can bike to school. On weekends my family rides to the farmer's market and parks.</p>	<p>My Family Started Composting at Home Saved 380 kgCO_{2e}/year Saved 376 kg of waste/year, compared to throwing our organic waste in the garbage.</p>	<p>My Family Hangs Clothes to Dry Saved 530 kgCO_{2e}/year Saved 880 kWh/year, compared to using an electric dryer.</p>	<p>Using Power Bars, we cut our Phantom Load in Half Saved 210 kgCO_{2e}/year Saved 350 kWh/year, by using power bars.</p>	<p>Our School Turns Off Lights When Not Needed Saved 5300 kgCO_{2e}/year Saved 8800 kWh/year, compared to using T8 fluorescent lighting an extra 4 hours per day.</p>

#3

Ways to use this bingo card: Calculate greenhouse gas emissions reduced, and energy, or water, or waste reduced.

Give students/families a card.

Set a time period for the challenge, like a week, or a month.

Do one or more of the actions.

- If you have done an activity that requires a **technology** change (the stuff we use that saves energy. E.g. **Switched our 5 most used lights to LED**) you can see the greenhouse gas emissions, energy, or water, or waste your action has reduced.
- If you have done an activity that requires a **behaviour** change (the things we do that save energy. E.g. **My family hangs clothes to dry**) and do it for the whole time period of the challenge, you can calculate the greenhouse gas emissions, energy, or water, or waste your action has reduced from making that change. *Note - If the length of your challenge was a week, divide the amount of greenhouse gas emissions, or energy, or water, or waste savings listed by 52 (weeks in a year), to find your weekly saving.*

Note: the following are measured in this way;

- Energy in kilowatt hours per year (kWh/yr)
- Water in litres per year (L/yr)
- Waste in kilograms per year (kg/yr)
- Greenhouse gas emissions in kilograms of carbon dioxide equivalent per year (kgCO_{2e}/yr) Greenhouse gas emissions are based on how energy is generated in Saskatchewan.

E	N	E	R	G	Y

#4



Curriculum Connections

Grade 1 Health Education USC1.5 Explore the association between a healthy sense of "self" and one's positive connection with others and the environment. **DM1.1** Examine initial steps (i.e., Stop, Think, Do) for making basic choices regarding healthy behaviours; healthy brain, heart, and lungs; healthy relationships; pedestrian/street safety; and a healthy sense of self. **AP1.1** Apply the steps of Stop, Think, and Do (with guidance) to develop healthy behaviours related to a healthy brain, heart, and lungs; healthy relationships; pedestrian/street safety; and a healthy sense of self.

Social Studies DR1.3 Demonstrate awareness of humans' reliance on the natural environment to meet needs, and how location affects families in meeting needs and wants.

Grade 2 Health Education USC2.4 Examine social and personal meanings of "respect" and establish ways to show respect for self, persons, living things, possessions, and the environment.

Science AW2.2 Assess the importance of air and water for the health and survival of living things, including self, and the environment.

Social Studies IN2.1 Determine characteristics of a community. **RW2.1**

Describe ways in which the local community meets needs and wants of its members.

RW2.3 Contribute to initiating and guiding change in local and global communities regarding environmental, social, and economic sustainability.

Grade 3 Social Studies IN3.3 Illustrate examples of interdependence of communities. **RW3.1**

Appraise the ways communities meet their members' needs and wants. **RW3.2** Analyze the creation and distribution of wealth in communities studied. **RW3.3** Evaluate the ways in which technologies have impacted daily life.

Grade 4 Health Education AP4.1 Design and apply, with guidance, two four-day action plans that require communication related to healthy eating and physical activity, prevention/ management of health challenges, negotiating disagreements, safety and protection, personal identity, and stressors.

Science LI4.1 Investigate the characteristics and physical properties of natural and artificial sources of light in the environment. **LI4.3** Assess personal, societal, and environmental impacts of light-related technological innovations including optical devices.

Social Studies RW4.1 Analyze the strategies Saskatchewan people have developed to meet the challenges presented by the natural environment.

Grade 5 Health Education USC5.7 Assess the importance of self-regulation and taking responsibility for one's actions. **AP5.1** Design and implement, with guidance, two five-day action plans that embrace health opportunities or address health challenges related to personal eating practices, changes of puberty, impact of illness/disease, identity and well-being, violence, peer pressure, and self-regulation.

Science MC5.3 Assess how the production, use, and disposal of raw materials and manufactured products affects self, society, and the environment.

Social Studies RW5.1 Explain the importance of sustainable management of the environment to Canada's future. **RW5.2** Hypothesize about economic changes that Canada may experience in the future.

Grade 6 Health Education AP6.10 Design and implement (with guidance) two six-day action plans that reflect affirmation of personal standards related to decision making, relationships, non-curable infections, stress management, body image, safety, and health promotions.



Science EL6.1 Assess personal, societal, economic, and environmental impacts of electricity use in Saskatchewan and propose actions to reduce those impacts.

Social Studies RW6.1 Examine and analyze factors that contribute to quality of life, including material and non-material factors. **RW6.2** Contribute to initiating and guiding change in local and global communities regarding environmental, social, and economic sustainability.

Grade 7 Health Education USC7.1 Establish and use strategies to commit to and act upon personal standards (see grade 6) for various aspects of daily living over which an individual has control.

USC7.4 Demonstrate a personalized and coherent understanding of the importance of nurturing harmony in relationships (with self, others, and the environment), and apply effective strategies to re/establish harmony when conflict arises.

Science IE7.4 Analyze how ecosystems change in response to natural and human influences, and propose actions to reduce the impact of human behaviour on a specific ecosystem.

Social Studies IN7.3 Analyze the relationship of technology to globalization. **RW7.3** Assess the ecological stewardship of economies of Canada and the circumpolar and Pacific Rim countries.

Grade 8 Health Education USC8.1 Analyze and establish effective strategies of support for purposes of helping others increase health-enhancing behaviours. **USC8.6**

Examine and assess the concept of sustainability from many perspectives and develop an understanding of its implications for the well-being of self, others, and the environment.

DM8.8 Appraise the role of "support" in making healthy decisions related to family roles and responsibilities, non-curable infections/diseases, violence and abuse, body image, sustainability, and sexual health. **AP8.10** Design, implement, and evaluate three seven-day action plans that establish multiple supports for responsible health action related to family roles and responsibilities, non-curable infections/diseases, violence and abuse, body image, sustainability, and sexual health.

Science WS8.1 Analyze the impact of natural and human-induced changes to the characteristics and distribution of water in local, regional, and national ecosystems.



Save Energy Bingo Announcements

Use these announcements to support your campaign

Energy

One of the easiest, and biggest ways we can save electricity in schools is to turn out lights that aren't needed. Fairhaven school in Saskatoon reduced their lighting use by over 40% in a one-month campaign, just by turning out lights when the sun was shining and making sure that lights were turned out when no one was in the room.

Energy

Phantom load is the electric power used by equipment even when it is turned off. It is using that power in order to be ready to come back on quickly. It is using some power if it:

- it has a clock,
- has a remote control,
- has a visible light (usually green or red) when not in use,
- is programmable,
- is instant on,
- or is a SMART device.

Transportation

Students from the Science Trek program at Montgomery School often bike to school. One year they counted their sustainable ways of getting to school, including biking, busing and carpooling, and realized they added up to 5460 acts of conservation!

Water

What's the connection between water and energy? The water we use has to be pumped from a river, lake or well, treated with chemicals, and pumped to our homes. All that pumping uses energy and produces CO_{2e} emissions. When we waste water or use more water than we need to, those are emissions that we don't need to be producing.

Water

Take a shorter shower! There are lots of ways to use less water at home and one of them is to take shorter showers of 5-10 minutes or less.

Waste

Reduce, reuse and recycle – those are the 3 R's but we often forget about the first 2, and go right to the 3rd one – recycling. Reducing or cutting down on the things we buy and use is the most important, because it means we aren't creating more stuff that needs to be recycled. Reusing things, like food containers and water bottles is next best, and then recycling what can't be used again.

Waste

When they did their garbage sort, students at Churchill High School in La Ronge discovered they were throwing away a lot of leftover food. As a result of their audit, they made a lot of changes to the way they handle the waste, including using worms to compost the leftovers.

Jane Goodall said "You cannot get through a single day without having an impact on the world around you. What you do makes a difference, and you have to decide what kind of difference you want to make."