Building Capacity for Sustainable Action through Inquiry, Experiential Learning, and Collaboration

Student Action for a Sustainable Future

Saskatoon, Canada

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GEEP is a partnership of the U.S. Environmental Protection Agency, the Environmental Protection Administration of Taiwan, and the North American Association for Environmental Education.
Overview

This case study explores Student Action for a Sustainable Future, a comprehensive environmental education program for middle school students that takes place in the city of Saskatoon, the largest city in the Canadian province of Saskatchewan.

The Student Action for a Sustainable Future (SASF) program engages grade 5-8 classrooms in action and inquiry projects in the areas of waste, water, energy, food, biodiversity, and transportation. Twelve teachers are accepted each year that represent a balance of school divisions, grades, and school locations. Participating teachers are provided with support, resources, professional development, planning time, networking opportunities, action project funds, and access to sustainability and environmental experts. At the end of the year, the students highlight their experiences and results at a student showcase, which provides an exciting and celebratory event for everyone involved.

The program focuses on the following objectives in order to support teachers and students to work towards outcomes that impact their classrooms, schools, households, and the community at large:

- Providing a framework that is adaptable to the participants’ needs, interests, and context;
- Including youth in the decision-making process;
- Using inquiry to guide both the process and results of the program;
- Planning environmental action projects, and then acting on those plans;
- Striving towards environmental outcomes that are measurable, experiential, and place-based;
- Making connections and developing partnerships with community members and organizations;
- Integrating multiple ways of knowing, with a particular focus on Indigenous ways of knowing and being;
- Engaging youth and teachers in politics;
- Making strong links to curriculum; and
- Responding to the goals set out in the City of Saskatoon’s Strategic Plan.
Background

The Student Action for a Sustainable Future partnership includes formal educators, non-formal educators, local government, and community based organizations. Through a shared interest in both education and sustainability, the partnership was formed in 2012 with the purpose of developing a pilot program that would help the City of Saskatoon achieve its environmental mandate and greenhouse gas reduction targets, while also building student and teacher capacity to take action. Partners include the City of Saskatoon, Saskatoon Public School Division, Greater Saskatoon Catholic Schools, Saskatchewan Environmental Society, Sustainability Education Research Institute (SERI, University of Saskatchewan), Saskatoon Light & Power, and 14 community based organizations. The City of Saskatoon remains the primary funder, while the Saskatchewan Environmental Society plays a leading role in program delivery.

The SASF program draws upon the strengths of its partners to offer diverse opportunities, knowledge, ways of understanding, and skills, which brings relevance and meaning to student and teacher learning.
Approach

**Questioning, Analysis and Interpretation Skills**

The inquiry process provides a framework that is open-ended and adaptable to the participants’ interests, contexts, and learning objectives. The SASF participants use inquiry to:

- explore concepts, ideas, and questions related to sustainability;
- contemplate why our communities, homes, and classrooms are the way they are, and how they could potentially be different; and
- find ways to participate in solutions, even when solutions are not obvious or straightforward.

**Knowledge of Environmental Processes and Systems**

To understand a changing world—including how humans impact the environment, how the environment impacts humans, and how humans impact each other—it is important for sustainability to be considered through an interdisciplinary lens that incorporates multiple world views. The SASF program attempts to respond to this by:

- Connecting teachers to a diversity of people and organizations who provide authentic and meaningful educational experiences;
- Providing support to teachers to integrate different knowledges, perspectives, practices, and cultures into their teaching;
- Encouraging teachers to invite elders, knowledge keepers, and community members to participate in their students’ learning; and
- Linking the program to a variety of curriculum areas, including: English / Language Arts; Science; Fine Arts; Social Studies; Health; Mathematics; Phys. Ed; and Career Ed.

**Skills for Understanding and Addressing Environmental Issues**

To build participants’ capacity to make the “leap” from knowing to doing, the SASF program provides:

- Spaces where peer support, interest, and encouragement emerge, which helps motivate people to initiate and maintain action;
- Opportunities to network, learn from, and collaborate with others;
- Hands-on learning opportunities;
- Planning time for teachers to think through what they’d like to do and how they’d like to do it;
- Access to a community of environmental professionals and educators;
- Free bus fare so each classroom can gain experiences in/with the community; and
- Access to a small amount of money that can be used towards achieving action projects.

**Personal and Civic Responsibility**

Municipal involvement in the SASF program provides teachers and students with the opportunity to positively engage with their local government, while also encouraging educators to build politics (whether formally or informally) into how and what they teach. Activities have ranged from meetings with city councillors, speaking with the media, writing letters to government and businesses, holding community events, writing for the school newsletter, and communicating with other students, teachers, and parents.
Outcomes/Results

The Saskatchewan Environmental Society works with each classroom to conduct environmental audits, which have been developed for each of the 6 program areas (waste, water, energy, food, biodiversity, and transportation). This allows classrooms to measure the impacts of their actions on factors such as energy consumption, water use, fuel use, the waste stream, and greenhouse gas emissions:

<table>
<thead>
<tr>
<th>Audit Category</th>
<th>2013-14 SCHOOL YEAR</th>
<th>2014-15 SCHOOL YEAR</th>
<th>2015-16 SCHOOL YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>17,000 kWh</td>
<td>$1,160</td>
<td>$1,270</td>
</tr>
<tr>
<td>Gas</td>
<td>88 GJ</td>
<td>$230</td>
<td>No Projects</td>
</tr>
<tr>
<td>Water</td>
<td>700 m3</td>
<td>$1,800</td>
<td>350 m3</td>
</tr>
<tr>
<td>Fuel (gasoline)</td>
<td>230 L</td>
<td>$230</td>
<td>500 L</td>
</tr>
<tr>
<td>Waste</td>
<td>8,000 kg</td>
<td>—*</td>
<td>2,210 kg</td>
</tr>
<tr>
<td>Greenhouse Gases</td>
<td>28,850kg CO2e</td>
<td>—*</td>
<td>18,660kg CO2e</td>
</tr>
</tbody>
</table>

*Not available

The audit process has been an effective way of engaging students in “real-world” solutions and experiential learning. Some of the action projects that have contributed to positive environmental outcomes include:

- Developing a bike generator to charge cell phones;
- Setting up vermi compost and recycling systems;
- Reducing idling in front of their schools by talking to drivers and putting up Idle Free Zone signage;
- Growing vegetables and micro-greens in their classrooms;
- Creating an Indigenous Healing garden in their school yard;
- Building solar ovens;
- Installing LED lights;
- Doing home water and energy audits and conserving water and energy at home; and
- Holding school wide lights-out competitions.

So far, the program has reached 43% of the elementary schools within the Saskatoon Public School Division, and 38% of the elementary schools within the Greater Saskatoon Catholic School's jurisdiction.

Celebration is key. The student showcase allows everyone to come together and celebrate their accomplishments. Students are excited to share the results of their work, while attendees are inspired by what's possible in our communities.
Evaluation Plan

Student and teacher surveys are used to better understand the results of the program, participant experiences, and program successes. The survey tool also helps provide the story, context, and meaning behind the quantitative environmental audit data. The results are used to communicate the accomplishments of the program to stakeholders and the public, build and maintain support for the program, attract funding and in-kind resources, and assess where improvements or changes to the program may be required.

The teacher and student surveys have revealed that:

- Teachers’ comfort levels with teaching sustainability and other environmental issues have increased;
- Students’ understandings of the importance of living more sustainable lives have increased;
- Teachers agree that the SASF program will leave a lasting legacy; and
- Students are engaged in their learning:
  - The projects were fun!
  - I learned a lot of interesting things
  - I enjoyed learning this way
  - I felt encouraged to be a leader in sustainability
  - I like that I got to spend time with friends
  - I feel like I made a positive impact on the earth
  - I feel like I made a positive impact on others
  - I like that other people were interested in our projects
  - I enjoyed the year-end student showcase

Although the lasting impacts of the program are not being measured at this time, we have started to survey past participants to understand what has continued from their participation in the program. A teacher website has also been created that includes resources, a sharing platform, project ideas, and more. We believe it will become a way to maintain relationships with past participants, evaluate teachers’ continued involvement in sustainability, and assess whether teachers continue to use what they learned in the program in years following completion.
Lessons Learned

At a time when measurement is becoming increasingly sought after by our educational, political, and corporate institutions, building some level of quantitative and qualitative analysis into our educational programming can help attract funding, gain and maintain support, and showcase the benefits of our work. It has also been used in the SASF program to help students and teachers understand that the actions they and others take (or do not take) can have a very real impact on the environment.

However, the value of the SASF program cannot simply be expressed through measurement. As prominent environmental educator, Arjen Wals, notes, “What you can't measure, still exists.” There are numerous outcomes, benefits, and successes of the SASF program that are not measurable or that the partners feel would not benefit from being assessed in such a manner. It’s the compelling stories, new relationships, meaningful experiences, and improved confidence to participate in sustainable solutions that will leave a lasting legacy, build people’s capacity for future action, and contribute to the cultural shift that is necessary in our communities to address sustainability in a holistic manner.

Over time, it is hoped that more programs like this are developed and delivered until, eventually, they are seen as “business-as-usual.” If we are serious about sustainability, we cannot simply focus on producing immediate results. We must be looking at how to build capacity for future action and engagement. We hope that this program influences long-term thinking, actions, and values that contribute (and continue to contribute) to a more sustainable way of living.

Students and teachers have a voice that can influence the direction of our communities. As they discuss their ideas and knowledge with other people and model sustainable behaviours in their day-to-day lives, they are leading to a shift in their classrooms, homes, schools, and communities.
Resources

**Main page:**
Student Action for a Sustainable Future:
[www.saskatoon.ca/studentaction](http://www.saskatoon.ca/studentaction)

**Partners:**
Saskatchewan Environmental Society:
[www.environmentalsociety.ca/programs/k-12-school-programs/sasf](http://www.environmentalsociety.ca/programs/k-12-school-programs/sasf)
Saskatoon Public Schools:
[www.saskatoonpublicschools.ca/Board/celebratingexcellence/mar25/Pages/default.aspx](http://www.saskatoonpublicschools.ca/Board/celebratingexcellence/mar25/Pages/default.aspx)
Greater Saskatoon Catholic Schools:
[www.gscs.ca](http://www.gscs.ca)
Sustainability Education Research, Institute University of Saskatchewan:
[www.seri.usask.ca](http://www.seri.usask.ca)
Saskatoon Light & Power:
[www.saskatoon.ca/services-residents/power-water/saskatoon-light-power](http://www.saskatoon.ca/services-residents/power-water/saskatoon-light-power)

**More information:**
[www.ecofriendlysask.ca/2014/04/we-are-eco-mean-but-global-green.html](http://www.ecofriendlysask.ca/2014/04/we-are-eco-mean-but-global-green.html)

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