

Creating a Sustainability Plan



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Activity Overview

In this activity students will develop a sustainability plan for a fictional city. Students will assume the role of city councillors. After completing the assignment, students will meet as the city council and will present their ideas. Together they will reach a consensus and put forward a final sustainability plan.

Curriculum Connections

This activity is designed to meet the following outcome from the Social 10 Alberta curriculum:

- Related Issue 3: To what extent does globalization contribute to sustainable prosperity for all people?

** Although this activity was created for use in Social Studies many of the learning objectives are relevant to the Science curriculum.*

Time Required

Approximately three lessons

Materials Required

- Welcome to Blue Bear City Brochure
- Student handout
- Computers with an internet connection

Lesson Format

- Pre-discussion
- Inquiry Activity
- Group Discussion/Town Council Meeting
- Reflection

Pre-requisite Knowledge

- A general understanding of sustainability, ecological footprints, and methods to reduce an individual's environmental impact

For the Teacher

Instructions

Lesson One

1. Start the lesson with a ten minute discussion to determine what students' ideal city would look like. Place students in small groups to discuss and then share with the class. Ask questions such as:
 - a. Would it be a big or small city?
 - b. Would it have parks and green space?
 - c. What types of services would the city to offer?
 - d. Will your vision of the ideal city change as you get older?
2. Distribute the Blue Bear City brochure and read through the description of the city.
3. Hand out the assignment to the students. Encourage students to pay close attention to the assessment criteria when writing their assignment.
4. Assign a due date for the project and provide extra class time to complete the project as needed.

Final Lesson

1. Place the students in groups of five to represent a city council.
2. Instruct the groups to choose a mayor. This person will lead the discussions and act as a recorder.
3. Student will present their sustainability plans to each other. Together the students will decide a

plan of action for the city that combines the best ideas in the group. The mayor will be responsible for recording this information.

4. The teacher will observe student interactions and assess them using the City Council Meeting Rubric.

5. After students have finished the activity they will complete a reflection activity. Ask students to write a short reflection that compares the city in the activity with their ideal city from lesson one.

Guidance

Some students might feel distressed by having a task with no clear solution. It is important to stress to the students that there is no correct answer. All plans will have strengths and weaknesses. The depth of research and support from real life examples will differentiate levels of achievement.

Possible Adaptations

- Students create a sustainability plan for their own town or city
- Students evaluate each other's sustainability plans

Assessment

Assessment criteria is found in the student handout materials.



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For the Student

Task

You are a city councillor of Blue Bear City. Your city faces many challenges regarding the relationship among people, the land, and globalization. You have been put in charge of creating a sustainability plan that will ensure the prosperity of Blue Bear City for future generations. You must balance the needs of the environment with the need for economic development.

Your audience for the project will be other city council members as well as residents of your city. A well researched and supported sustainability plan will be more likely to get the support of your fellow council members.

Format

The way you chose to communicate your ideas is up to you. Possible formats include a written document, pamphlet, PowerPoint Presentation, website, or glogster poster.

Read through the assignment and criteria carefully to include all of the information you need.

What to Include

You will produce a sustainability plan that:

1. Identifies three of the most urgent sustainability issues in Blue Bear City and explains why they are the most important.
2. Creates short term and long term goals for these issues.
3. Provides concrete initiatives that will be implemented to reach these goals including timeline, budget, resources, and staff needed.
4. Includes examples of similar successful projects in other cities around the world to support your plan.

TIPS

Be creative and innovative

Use real life examples as support

Make sure your ideas would work for Canadians

Think of how the public would react to your ideas

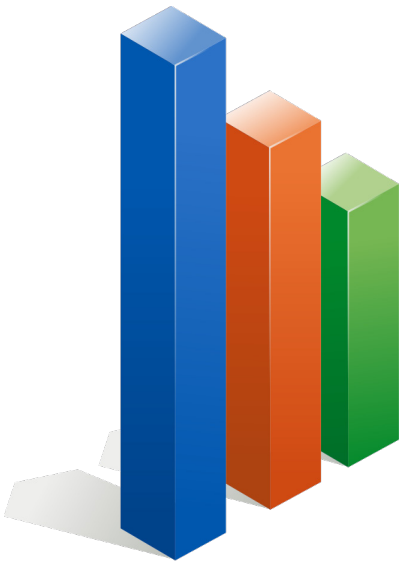
Be careful with money! Expensive ideas are often unpopular with the public

Welcome to Blue Bear City

Blue Bear City is located in Canada and has a population of 1 000 000. It is located in the foothills of the Rocky Mountains. The city has a university and is full of bright and innovative people. The city is also surrounded by an abundance of natural resources. The majority of the wealth generated in the city comes from the export of natural resources (renewable and non-renewable) to the United States and Asia.



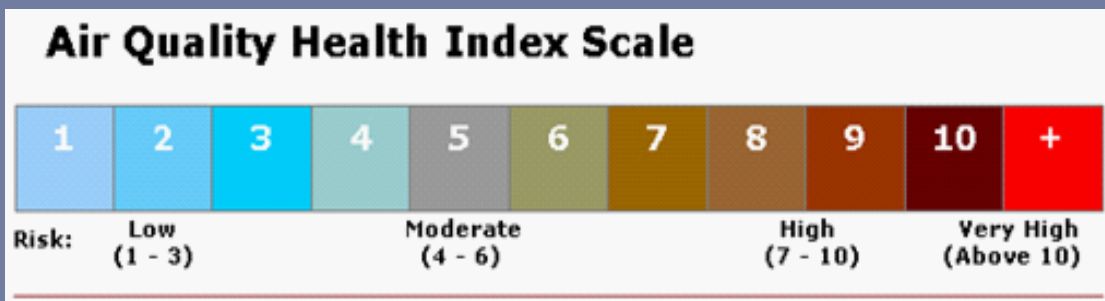
Economy



A current global recession has done damage to the local economy. Many people are out of work or underemployed. Educated young people have been harmed the most in the recession. The only stable source of jobs has been the oil and gas industry. The economy has increasingly become reliant on non-renewable resources.

Since the recent recession Blue Bear City has been running a deficit. The city has had to cut back on some current offerings in order to pay for essential services.

Air Quality



<http://environment.alberta.ca/images/AQHI-Scale.jpg>

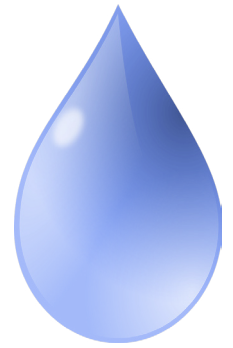
Blue Bear City has poor air quality. The city's air quality is usually a 6 but on days in the summer when the air is hot and stagnant it can be as high as 9. The air pollution is caused from a combination of traffic, industry, and pollution from a nearby coal power plant.

Many people in the city suffer from asthma and other health conditions because of the poor air quality. The smog also harms tourism.

Water

In years when there is drought in the province the Blue Bear River can get very low. Sometimes in the summer there is not enough water for the city. As the Earth's climate changes there is the threat that this naturally dry area will become even drier. Desertification of the surrounding area is a major concern.

The Blue Bear River watershed is shared with the United States. The Blue Bear River is an important water source for Americans as well. There is considerable political pressure on Canada to protect this resource.



Urban Sprawl

Blue Bear City is very large with a low urban density. There is not enough space for people moving to the city. What has typically happened in the past is that the city appropriates land from the surrounding farms and forests.

The city is experiencing an obesity epidemic which has been attributed to the sprawling neighbourhoods and car driving culture. Many people have to drive long distances to get to work and this contributes to the air pollution. A large portion of taxes are spent maintaining roads (ex. repairs and snow removal). Run-off from the roads pollutes the Blue Bear River.



High Ecological Footprint

People in the city have a much larger ecological footprint than an average Canadian city (which is already high to begin with). People use more water and more electricity than average Canadians. They also produce above the national average of garbage per household. This leads to high garbage disposal costs for the city.

How You Will Be Assessed

Sustainability Plan

Criteria	Excellent	Proficient	Adequate	Limited	Insufficient
<p>Research</p> <p>Explores multiple perspectives regarding the relationship among people, the land and globalization</p>	<p>Uses a rich and diverse collection of resources and has gone beyond basic facts to present an advanced insight into the topic</p>	<p>Uses a wide variety of resources and has gone beyond basic facts to present some insight into the topic</p>	<p>Uses a multiple resources to present basic facts about the topics</p>	<p>Uses limited resources and contains only very basic facts of the issue.</p>	<p>Insufficient evidence of student performance</p>
<p>Develops solution</p> <p>Evaluates actions and policies that impact the environment and create an action plan to implement in a new situation</p>	<p>Develops a thoughtful and comprehensive action plan to solve problems connected to sustainability</p>	<p>Develops a detailed and complete action plan to solve problems connected to sustainability</p>	<p>Develops a simple but practical action plan to solve problems connected to sustainability</p>	<p>Develops a vague or improbable action plan to solve problems connected to sustainability</p>	<p>Insufficient evidence of student performance</p>
<p>Analyzes Information</p> <p>Analyzes multiple perspectives on sustainability and prosperity in a globalizing world</p>	<p>Develops significant and pertinent conclusions with convincing support</p>	<p>Develops meaningful and relevant conclusions with appropriate support</p>	<p>Develops credible and related conclusions with general support</p>	<p>Develops vague or erroneous conclusions with irrelevant support</p>	<p>Insufficient evidence of student performance</p>

City Council Meeting

Criteria	Excellent	Adequate	Insufficient
<p>Consensus Building</p> <p>Demonstrates skills of cooperation and conflict resolution. Engages in persuading, compromising and negotiating to resolve conflicts and differences</p>	<p>Actively shares knowledge; encourages others; is patient; considerate of opposing views</p>	<p>Usually shares knowledge but requires encouragement; sometimes needs redirection or prompting</p>	<p>Refrains from contributing any knowledge or denigrates others' knowledge. Off-task; distracting; inappropriate responses or contributions</p>