

A better world is
 **Sight**

**INSIGHT 360:
FROM CLASSROOM TO WORLD**

Teacher's Guide



ACGC
ALBERTA COUNCIL FOR
GLOBAL COOPERATION

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INTRODUCTION

Through Cardboard Glasses: A Better World is InSight

At ACGC we believe that “A better world is InSight.” This package is an invitation to learn about sustainable development, including the unique challenges women and girls face across the globe, while supporting teachers and students in becoming global citizens capable of imagining a better world for all. This package consists of cardboard glasses, instructions on how to use them, and curricular guides for three 360 videos curated from the United Nations and the international cooperation community. It is designed to transport students and teachers from classroom to world by learning about some of the challenges people in the Global South face through an immersive experience that brings us a little bit closer to understanding their lived realities. This introduction provides an overview of InSight 360 and two connected frameworks for guiding this journey: Global Citizenship Education and the United Nations Sustainable Development Goals [SDGs].

What is InSight 360?

The InSight Project is a 360 video cylinder installation that toured schools and libraries across the prairies. Through 360 video and interactive workshops, InSight brought stories of global development to life for over 50,000 youth and members of the public. The tour began in Alberta with ACGC in 2021, then after a pause due to COVID 19 toured Saskatchewan with the Saskatchewan Council for International Cooperation in 2022, and wrapped up in 2023 in Manitoba with the Manitoba Council for International Cooperation.



The 360 video cylinder dome



Clouds Over Sidra 360 video playing in the dome



InSight 360 cardboard glasses



An alternative headset (with phone attached)

What is 360 Video?

360 video is an immersive, spherical video recording captured by a camera from multiple directions. It projects a view in every direction at the same time. Mobile devices, and web browsers can be used to view and interact with a 360 video by allowing viewers to control where they are viewing from within the simulated environment. Your cardboard glasses attached to your phone support you to engage in this medium: as you move, your view adjusts as though you're observing from within or near the scene. *(See pages 7 and 8 for instructions on how to set up your cardboard glasses.)*

Why Go from Classroom to World?

Since Alberta has already had our turn to experience the 360 video cylinder installation, we have developed this resource so that teachers can bring an adapted 360 experience to classrooms. The objectives of InSight 360: From Classroom to World are to:

- Provide students a general overview of the SDGs and their purpose;
- Apply the framework, including SDG 5: Gender Equality, to explore three 360 videos;
- Engage students in a process for addressing real-world global issues from their own communities;
- Encourage practices and principles of global citizenship education in ways that align with or enhance the current Alberta curriculum.

To reach these objectives, we are guided by Global Citizenship Education.

What is Global Citizenship Education?

Global citizenship education is a lens through which to see the world. At ACGC we understand global citizenship as “an ethos” primarily concerned with fostering a sense of belonging to the global community and to a common humanity. This not only involves individuals experiencing solidarity and collective identity themselves, but also necessitates collective responsibility to take local and global action for a better world.

By bringing the InSight 360 experience to Alberta classrooms, we aim to support teachers to engage global citizenship education by using the cardboard glasses as a tool for transporting realities, from local to global, or classroom to world. In many ways, the cardboard glasses are a metaphor for global citizenship: they encourage us to see through the eyes of individuals and communities around the world, bringing us closer to their lived experiences. This way of seeing can help to grow understanding of other realities by honing empathy.

Following UNESCO's guide, **Global Citizenship Education: Topics and Learning Objectives** [2015], we emphasize the importance of cognitive, socio-emotional, and behavioural learning outcomes that foster active global citizenship. These interlinked learning processes are designed to prepare learners to contribute to and thrive within a sustainable, interconnected world. The cognitive domain represents the knowledge and thinking skills necessary to better understand the world and its complexities. An example is learning what it means to have refugee status and how to analyze international relations to better understand the current refugee crisis. The socio-emotional domain represents the values, attitudes and social skills that support learners to live together with others respectfully and peacefully. This involves honing the capacity to see from multiple perspectives, and respecting opposing viewpoints. Finally, the behavioural domain represents the practical application of knowledge and values through conduct, such as demonstrating empathy. Taken together, these outcomes support learning to know, do, be and to live together [UNESCO, 2015].

What are the Sustainable Development Goals (SDGs)?



In 2015, world leaders from all 193 United Nations Member States adopted the 2030 Agenda for Sustainable Development, creating the 17 SDGs to guide global action on the urgent economic, social, and environmental challenges facing our planet. From reducing inequalities, to promoting good health and well-being, to ensuring access to affordable and clean energy, the Goals are a universal call to action to create a better world and leave no one behind.

Extensive resources on the SDGs are available online. Here are a few we recommend:

UN Sustainable Development Goals website:

www.un.org/sustainabledevelopment/development-agenda/

Global Goals campaign website: www.globalgoals.org

Together Alberta: together.acgc.ca

Learn more about taking action on the SDGs in Alberta through stories and maps.

Alberta Youth Paper on the SDGs: www.acgc.ca/AlbertayouthSDGReport

Learn how Alberta youth want to engage in global issues through this 2021 report written by high school students.

SETTING UP YOUR CARDBOARD GLASSES

What you will need

- InSight 360 cardboard glasses (ordered from ACGC)
- A mobile phone (Android phones work best)
- A web-based media player (YouTube)
- Access to Wi-Fi
- Earphones (recommended)

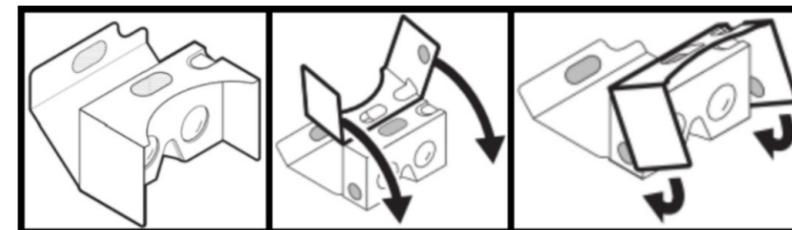
Health & Safety warning

For anyone prone to disorientation, this may be a triggering experience.

You may experience motion sickness when the video is playing.

Please view at your own discretion. If you are feeling sick at all, take off the glasses!

Assemble Your Cardboard Glasses



Step 2

Step 3

Step 4

Step 1. When you first get your cardboard glasses, remove the protective sleeve.

Step 2. Lift up on the top tab to release the velcro.

Step 3. Open the sides (these are folded under the top tab after you open it) and rotate the flap over to the backside of the case.

Step 4. Attach the round velcro pieces together to secure the sides.

Step 5. Remove the protective blue coverings from the lenses.

Prepare Your Phone

1. Download the YouTube app on your phone.
2. Search for the 360 video your class will be watching for the lesson.
3. Click on this button  on the bottom right hand side of the YouTube video.
4. Ensure that the volume is turned on for the phone.
5. The image on your phone should be split into two parts like the image below.



Screenshot from phone of *Clouds Over Sidra*

Trouble-shooting tips

Using the cardboard glasses can be awkward! Here are some tips for adapting the experience to accommodate common challenges:

- If you get tired of holding the cardboard glasses, try resting your elbows on a table or desk;
- The cardboard glasses don't fit all phone sizes. Plan ahead to borrow phones that fit, or work together to share the ones that do;
- Using the cardboard glasses can be challenging for those with glasses of their own! An alternative is to watch without glasses by panning with your phone, or watching from a computer or tablet, navigating with your mouse or finger;
- The above option is also an option for anyone prone to disorientation or headaches;
- The quality of 360 videos on phones is quite low. This is the current reality of the technology. Go with it!

INTRODUCTORY ACTIVITY: POWER FLOWERS

Purpose

This activity is designed to support students to identify and reflect upon the ways that their own social identities align with (or do not align with) those of the most powerful in society. Because each of the three 360 videos featured in this guide address various inequalities, this activity offers a reflective tool for considering the multiple ways that power is distributed in the world in relation to our lives as individuals.

Level: This activity is designed for Grade 9-12 students, but can be adapted for younger students.

Introduction

This Power Flower activity is a personal tool for analyzing power. It can help guide deeper understanding of the ways that our intersecting identities position us with advantages and disadvantages. It supports us to understand how power is relational: how power is constructed in relation to those people and systems that are most powerful in society. To relate this to the SDGs, we can think about **SDG 10: Reduced Inequalities**. If we are interested in working towards this goal, it is important to be able to first recognize how different social locations or identities serve to advantage or disadvantage people. For example, we have **SDG 5: Gender Equality** because we know that generally speaking women and non-gender conforming individuals are disadvantaged in society, relative to men, who are advantaged in society.

Our identities are complex and they intersect

We all have multiple, nuanced identity factors that together inform how we see ourselves and the world, and how others see us. Just as our own identities are complex, so too are those of each and every individual around the world, including the individuals who share their stories in the 360 videos featured in this teacher's guide. Gender, sexuality, race, ethnicity, nationality, religion, age, education, ability, among other differences, intersect and interact to shape who we are and what challenges and opportunities we encounter.

Creating and adapting flowers

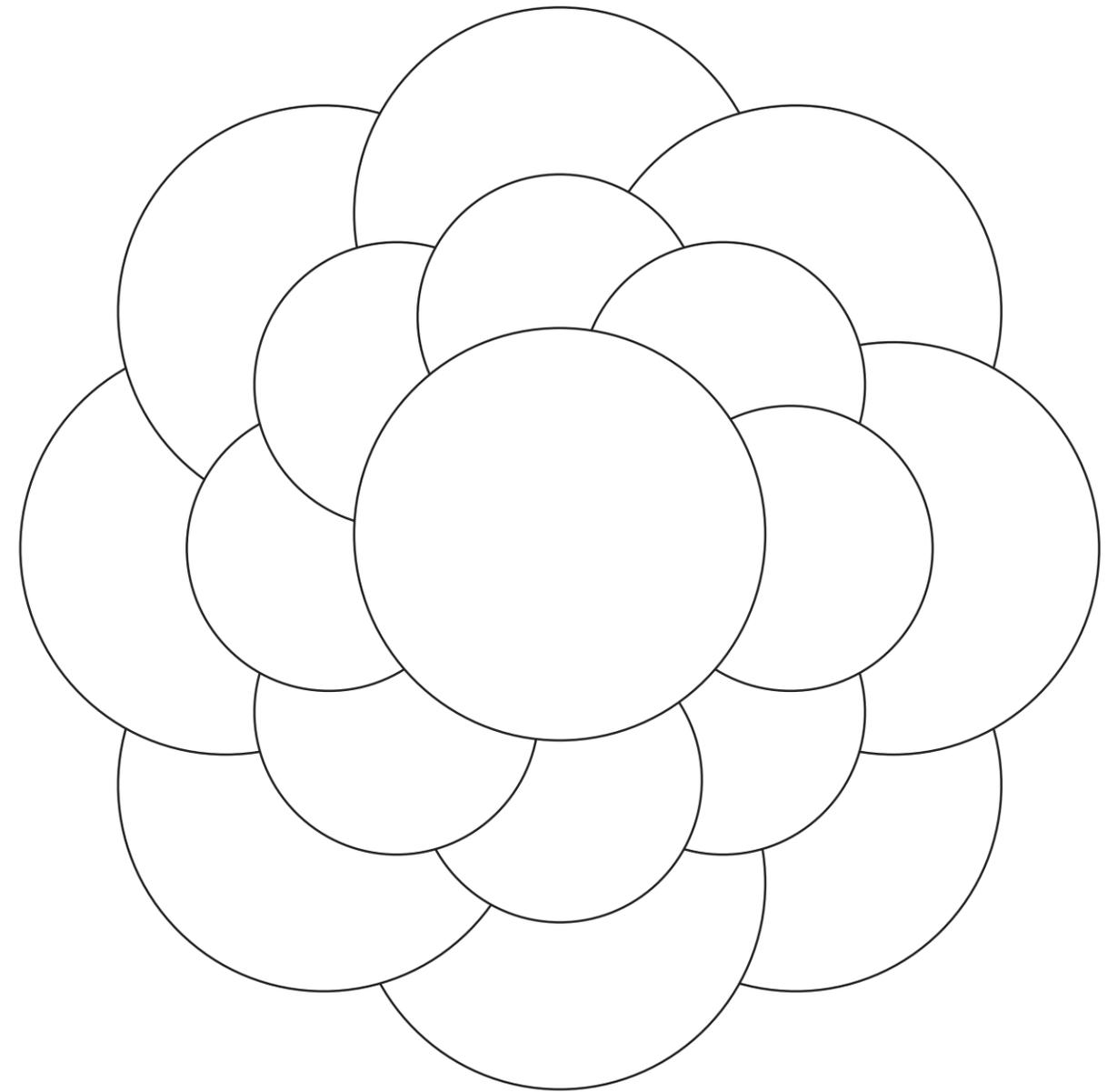
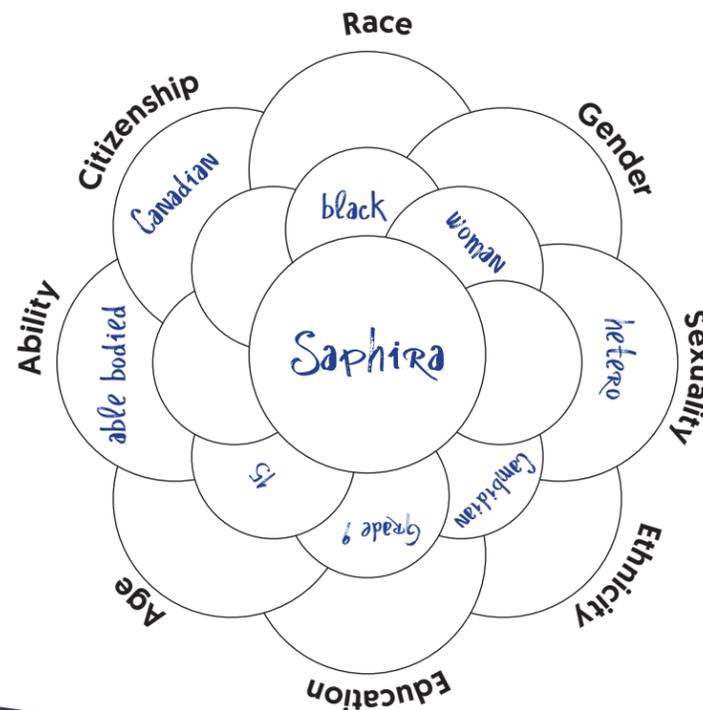
There are multiple and varied versions of the power flower exercise available online. It is important to approach this exercise in a way that meets your students where they are at by adapting it, as needed. The version we use in this guide can easily be modified. For example, you can have more or less petals. You can also ask students to draw their own, and model how to approach the exercise on flip chart paper or on a whiteboard.

Group categories, personal reflections

To begin, facilitate a discussion as a class about what the main features of the most socially powerful people are. These characteristics will be represented by the outer petals of the flower. For example, someone might suggest “rich countries” or developed countries, such as Canada and the United States. These examples speak to the category of nationality or citizenship (shown outside the petals below).

Once you have come up with categories, ask students to note their own identities on their flowers. For example, for citizenship students would write Canadian in an outer petal if they are Canadian citizens, or they might write Canadian-Egyptian or Pakistani-Canadian if they are dual Citizens (citizenship should not be confused with ethnicity).

Example



- Step 1:** As a group, identify social location categories and note them on the outside of the larger petals.
- Step 2:** As individuals, note your identities on the petals. The outer petals represent the dominant feature for each category (advantages) and the inner petals represent the non-dominant feature (disadvantages).
- Step 3:** Write your name and/or draw a picture of yourself in the centre.

Let students know that this is a personal reflection. Students should not be required to share their flowers, as this activity is not intended to be a score sheet of individual power. The centre circle can be used for the student's name or a drawing of themselves.

Reflection questions

After completing the flowers, encourage students to think about how their own identities relate to those of the most powerful and least powerful in society. Consider asking:

- How many of your personal identities are different from the dominant identities?
- Which characteristics cannot be changed? Which ones can change?
- How does this exercise make you think/feel about your own power or potential for exercising power?
- How might your own identities influence your role as a global citizen?

Connecting this activity to the 360 videos

Be sure to return to this activity as you discuss one or more of the 360 videos. Below are a few connecting questions/activities to consider for each of the 3 videos.

Clouds Over Sidra

Draw a power flower for Sidra. How does it relate to your own?

Growing a World Wonder

Draw a power flower for Binta. How has her power changed since contributing to building the Great Green Wall?

Samuel's Fairtrade Journey

Draw a power flower for Samuel. How has his power changed since becoming a certified Fairtrade farmer? How has the power of women and girls in his family changed?

CLOUDS OVER SIDRA

View the 360 video: www.youtube.com/watch?v=mUosdCQsMkM.

Level: This activity is designed for Grade 9-12 students, but can be adapted for younger students. It aligns with the Alberta social studies curriculum. The 360 video and this activity could also inform other subject areas, such as Career and Technology Studies and various social sciences courses, such as Comparative Government or World Geography.

Learning objectives

- Gain insights and understandings about daily life experiences of Syrian refugees, especially girls, in the Za'atari Refugee Camp;
- Understand how gender and gender roles impact everyday experiences;
- Take action to promote SDG 5 in the classroom, school and/or wider community.

About Clouds Over Sidra

Synopsis: Clouds Over Sidra tells the story of Sidra, a 12 year old girl from Syria who lives in the Za'atari refugee camp in Jordan. The video explores her life experiences: her attendance at school, the food she eats, how her family lives, her perspective of men and other children, her perspective of the camp she lives in, and her desire to return home.

Produced for: United Nations SDG Action Campaign, Unicef Jordan, Vrse. January 2015

Directors: Gabo Arora, Barry Pousman, Chris Milk

Producers: Samantha Storr, Patrick Milling Smith, Joe Chen

Visit: <https://unvr.sdgactioncampaign.org/cloudsoversidra/>

Focus on SDG 5: Gender Equality

Gender equality is the foundation for a peaceful, prosperous and sustainable world. While there has been progress towards this goal, many challenges remain. These include discriminatory laws and social norms, the underrepresentation of women at all levels of political leadership, and ongoing violence against women and girls, which has surged in the wake of COVID-19. *Clouds Over Sidra* offers an opportunity to observe some of the ways that gender inequality persists through social limitations imposed on Sidra.

Notes

- When you are addressing gender in your classroom, be sure your lessons make room for all students on the spectrum.
- *Clouds Over Sidra* addresses the refugee crisis in Jordan and the violence in Syria. Please be aware of triggers and sensitivities within your student population.

Before Watching

- Consider introducing the Power Flower activity [pages 9-11] to encourage an attentiveness to intersectionality and power.
- Facilitate a short discussion on gender equality to gauge where students are at: For example, ask: What do you know about the inequalities facing women and girls in your own communities and globally? and why do you think it is important to eliminate gender inequalities?
- Share with students the synopsis of *Clouds Over Sidra*.
- Ask students to identify Syria and Jordan on a world map.

While Watching

See, Feel, Think, Wonder (Individual activity)

Encourage close observation, curiosity, and self-awareness by asking students to write down and/or draw pictures. Ask:

- What do you see?
- How do you feel?
- What do you think about Sidra's story?
- What does it make you wonder?

Gender Inequality Fact Sheet

1. In 2018, approximately 48.5% of the world's working-age women were a part of the labour force, compared to 75% of working-age men.
2. In Canada women who work full time make \$0.87 for every dollar a man makes.
3. 130 million girls are not attending primary or secondary school. Every day, girls around the world are denied their right to education, and the knowledge, skills and opportunities to create a better, brighter future.
4. Every year, approximately 12 million girls under 18 will be married worldwide, with little or no say in the matter. That's nearly 1 girl every 2 seconds.
5. According to the United Nations Foundation in 2017, "Around 303,000 girls and women die every year – that's 830 every day – from preventable causes related to pregnancy and childbirth. WHO estimates that 99% of these deaths occur in developing countries."
6. 1 in 5 women on U.S. and Canadian college campuses have experienced sexual assault.
7. According to the UNESCO groundbreaking report *Cracking the code: Girls' and women's education in STEM*, only 35% of STEM students in higher education globally are women.
8. In national parliaments around the world women make up 23.7 percent.
9. Only 52% of women married or in a union freely make their own decisions about sexual relations, contraceptive use, and health care.
10. Globally, women are just 13% of agricultural land holders.

Fact Sheet adapted from the Saskatchewan Council for International Cooperation's InSight Teacher Toolkit.

After Watching

Discuss the 360 video (group work)

Ask students to discuss the following questions in pairs or small groups.

- What role does gender play in Sidra's experience in the refugee camp?
- What inequalities does Sidra experience in the refugee camp because she is a girl?
- What would Sidra's power flower look like? (If students have done this activity.)
- What aspects of her experience are similar to your own? What aspects are different?

Finally, lead a discussion around the above questions and student responses as an entire class, emphasizing the question:

- Why do you think it is important to eliminate gender inequalities?

Review the Gender Inequality Fact Sheet

Working in groups, ask students to read the 10 facts on the fact sheet and discuss them.

- Were you surprised by any of these facts? Why or why not?

Wrap Up

Conclude by highlighting key points of the discussions and activities. Emphasis should be placed on:

- Intersectionality as an essential consideration in sustainable development work: Intersectionality is an analytical framework for understanding how aspects of a person's social and political identities combine to create different modes of discrimination and privilege. The petals of our own flowers and Sidra's shape our experiences in the world.
- Young girls like Sidra have particular challenges they face because of their gender and identity. Canadians can support gender equality through 3 pillars of support: building awareness, education, and legislative support. Consider extending this lesson by exploring further activities and discussions on the next page.

Further Activities and Discussions

Building Awareness

The first step towards any progress is awareness. Share Sidra's story with friends or family members. To make gender equality a reality, people need to be aware of what is happening now in the world and the benefits of change.

Education

One of the largest obstacles to gender equality is unequal access to education. To tackle gender inequality at the start, education for girls and women needs to be a top priority. Learn about and share the following resource: <https://www.unhcr.org/heturn/>

Legislative Support

There are many laws and systems in place that fuel gender inequality. Society needs to break these systems down and put new laws in place that promote gender equality. Write to your local MP regarding gender equality laws in Canada and supporting gender equality in the world through our humanitarian aid and sustainable development.

What can be done to promote gender equality in schools?

Work with students to start a list. Here are some starting points:

- Avoid gender stereotypes, such as 'boys don't cry' or 'girls don't fight;'
- Challenge expectations of professions typically associated with a particular gender;
- Avoid 'guys,' which can be exclusive, use gender-neutral pronouns like 'everyone;'
- Address phrases like 'you play like a girl' or 'man up,' and point out the gender implications of these statements and help find alternative phrasing;
- Avoid segregating boys and girls into separate lines or seating arrangements;
- Explore gender concepts and roles from different communities and cultures.

Please Share Feedback!

Please let us know how we are doing by filling out the survey below with your class.

acgc.ca/insight360feedback

SAMUEL'S FAIRTRADE JOURNEY

View the 360 video: <https://www.youtube.com/watch?v=LCmU-uK93wc>

Level: This activity is designed for Grade 6-9 students, but can be adapted for younger and older students. It aligns with the Alberta social studies curriculum.

Learning objectives

- Understand Fairtrade and be able to identify Fairtrade products;
- Understand the benefits of Fairtrade for farmers in developing countries;
- Engage with SDG 12: Responsible Consumption to understand ethical consumption and employ strategies to be more conscious consumers;
- Take action to promote SDG 12 in the classroom, school and/or wider community.

About Samuel's Fairtrade Journey

Synopsis: *Samuel's Fairtrade Journey* introduces the life of Samuel Maina, a Fairtrade coffee farmer in the Kangema district of Kenya. The video reveals the work of coffee farmers like Samuel, showcases the support farmers receive from Fairtrade, and explores the ways in which farmers navigate agricultural challenges, such as climate change.

Directed by: Marie Mainz

Produced by: Travis Lacey, Fairtrade Denmark, Peter Larsen Kae

Focus on SDG 12: Responsible Consumption

This lesson supports engagement around Sustainable Development Goal 12: Responsible Consumption by providing students with a better understanding of Fairtrade and sustainable farming.

Key Definitions

Fairtrade/Fair Trade: This is a trading partnership, based on dialogue, transparency and respect, which seeks greater equity in international trade. Fairtrade contributes to sustainable development by offering better trading conditions for, and securing the rights of, marginalized producers and workers—especially in the Global South.

Fairtrade Certification: This certification means that the product was produced by a small-scale farming organization that meets Fairtrade's social, economic, and environmental standards. These include protection of workers' rights and the environment, payment of a Fairtrade Minimum Price, and an additional Fairtrade Premium to invest in business or community projects. A Fairtrade certification means that the supply chain is being monitored and everyone is being treated fairly and getting fair wages. Fairtrade ensures farmers like Samuel are earning a fair wage.

Fairtrade Stamps of Approval: Third-party certifiers and membership-based organizations ensure that standards are met, often using a seal or a stamp of approval on product packaging. While each certifier is different, certifications ensure that workers have safe working conditions, are making fair wages, and that rigorous social, environmental, and economic standards are being met. The Canadian Fair Trade Network currently recognizes the following certifiers and/or membership-based organizations: Fairtrade International, the Small Producers' Symbol, the World Fair Trade Organization, and the Fair Trade Federation. <http://cftn.ca/fair-trade-verification>



Examples of Fairtrade certified logos

Before Watching

Warm up: Introduce Fairtrade

- Get started by opening up a conversation about consumption, such as by asking students what they (and their parents) consumed for breakfast. Ask if they know where these products were produced and by whom.
- Introduce the concepts of ethical consumption and Fairtrade by showing the fairtrade logos and asking students where they have seen these products before. Ask if they know where the Fairtrade items are produced, and which are sold here in Canada. Examples include: bananas, ice cream, flowers, honey, coffee, oranges, cocoa beans, cocoa, cotton, sports balls, dried and fresh fruits and vegetables, juices, nuts and oil seeds, quinoa, rice, spices, sugar, tea, and wine.
- Watch the following Fairtrade Canada videos:



Two women, two continents, one world:

<https://www.youtube.com/watch?v=5jYndOWzONM>

Choose the World You Want. Choose Fairtrade.

<https://www.youtube.com/watch?v=xb8nxeKMM6M>

Ask students to write down and/or draw a picture based on something they learned from one or both of these videos. Consider asking:

What does Fairtrade look like?

Who is Fairtrade for?

What would Fairtrade look like at our school?

While Watching Samuel's Fairtrade Journey

See, Feel, Think, Wonder (Individual activity)

Encourage close observation, curiosity, and self-awareness by asking students to write down and/or draw pictures. Ask:

- What do you see?
- How do you feel?
- What do you think about Samuel's story?
- What does it make you wonder?

After Watching

Lead a discussion (as a class or in groups), asking:

- What aspects of Samuel's family experience are similar to your own family? What aspects are different?
- What are the benefits of Fairtrade for Samuel, his family, and his community?
- Based on the observations you made (first activity), how might Samuel's story make you think differently about the products you consume?
- What did you notice about the role gender played in Samuel's story and his family?

Identifying Fairtrade Products

Materials:

- 4-6 chocolate bars, with at least two Fairtrade
Nut-free, Fairtrade examples include barkThins, Green and Blacks, and Camino.
Non-fairtrade nut-free include Mars Bars, Rolo, and Hershey plain milk chocolate.

Activities

- Hand out the chocolate bars to groups of students;
- Ask students (by round of applause) to rank their favourites:
Explain that we might like chocolate bars because of their taste, shareability, etc. but the ethics behind their production can be a way of ranking them as well;
- Ask groups to inspect their chocolates to see if it is Fairtrade.

Resources

World Vision's Fairtrade Chocolate Guide:

<https://www.worldvision.ca/no-child-for-sale/resources/fair-trade-chocolate-guide>

Hershey won't guarantee that their chocolate is slavery-free:

<https://nowtoronto.com/news/chocolate-child-labour-slavery-hersheys/>

Discuss

Why is it important to question where something was made and how the producer was treated when you are buying a product?

What do you think it means to consume ethically? What are some other questions that are important to ask about the products you are buying?

Next time you're at the grocery store, how would you find and choose a Fairtrade version of your favourite chocolate bar, or parents' tea and coffee?

Wrap Up

While Fairtrade does not 100% guarantee that there is no exploitation happening, having a more rigorous monitoring system in place, as well as a cooperative structure, helps control poor labour practices.

Consider extending the activity using common everyday products, including coffee, tea, bananas, and sugar products, or having students go home and look for any Fairtrade products in their cupboards, or take a tour to the grocery store!

Further Activities and Discussions

Take Action

Download Fairtrade Foundation's Kenyan Coffee Lesson. Learn about the impacts of Fairtrade in the global coffee trade: <https://schools.fairtrade.org.uk/teaching-resources/kenyan-coffee-lesson-kit/>

Promote Fairtrade by celebrating Fairtrade Month in Canada on October 23, 2023: <https://fairtrade.ca/fairtrademonth/>

Become a Fairtrade school: <https://fairtradeprograms.ca/fair-trade-schools/>

Join a local Fairtrade movement: www.FairtradeCalgary.com or <https://www.olds.ca/discover-olds/fair-trade-town>

Please Share Feedback!

Please let us know how we are doing by filling out the survey below with your class.

acgc.ca/insight360feedback

GROWING A WORLD WONDER

View the 360 video: <https://www.youtube.com/watch?v=pc3BTMVPlwc&t=13s>

Level: This activity is designed for Grade 7-8 students, but can be adapted for older students with more emphasis placed on making connections to other SDGs. It aligns with the Alberta science curriculum.

Learning objectives

- Understand desertification and the effects it can have on local & global climate;
- Understand ways people are countering desertification in developing countries;
- Realize the potential of community-wide actions and their capacity to create lasting change;
- To provide students an opportunity to engage with SDG 13: Climate Action.

About Growing a World Wonder

Synopsis: *Growing a World Wonder* captures the story of the Great Green Wall. The story follows Binta, a young Senegalese girl, as she and her family tend to their section of the Wall. The viewer gets to explore the challenges Binta and her family face and discover how the project is already transforming their lives for the better. *Growing a World Wonder* shows the global scale of this project and its potential to provide food and jobs.

Director: Richard Nockles

Producer: Mitch Turnbull

Producing Organization: Great Green Wall

Visit: www.greatgreenwall.org

Focus on SDG 13: Climate Action

This lesson supports engagement around Sustainable Development Goal 13: Climate Action by directly focusing on desertification.

Before Watching

- Ask students to identify Senegal on a world map
- Introduce the Great Green Wall:
<https://www.greatgreenwall.org/about-great-green-wall>

“The Great Green Wall is a project spanning northern Africa, in a region called the Sahel. The Sahel is an arid grassland, south of the Sahara Desert, which is especially susceptible to desertification. Desertification is the degradation of top soil, and can cause significant climatic events like famine and drought. The Great Green Wall project is working to establish 8000 km of strong and healthy natural forest to reinforce the soil and promote further agricultural production within the region.”

- Share with students the synopsis of *Growing a World Wonder*

While Watching

See, Feel, Think, Wonder (Individual activity)

Encourage close observation, curiosity, and self-awareness by asking students to write down and/or draw pictures as they watch or immediately after. Encourage students to imagine that they are right beside Binta engaging all their senses. Ask:

- What do you see?
- How do you feel?
- What do you think about Binta’s story?
- What does it make you wonder?

After Watching

Lead a discussion (as a class or in groups). Consider asking:

- Based on the observations you made (first activity), how does Binta’s story make you think differently about climate and climate change?
- Binta talked about how different members of her community responded to climate change and famine. What were some of the things she talked about?
- What is desertification to you and what can be done to counter it?
- Why do you think the Great Green Wall project is so important to Binta?

Hands-on Desertification

These activities will help students to better understand desertification along with practices that can help prevent it.

What is desertification?

- Desertification is the breakdown of soil through poor soil management and climate events, resulting in lost soil nutrients and groundwater retention.
- Its impacts include decreased agricultural yields and reduced access to drinking water.
- It is especially an issue in arid drylands and any ecosystems near deserts.
- Practices including conservation agriculture can help to prevent further desertification.

Materials

- Cookie sheet
- Bag of topsoil
- Shredded paper
- Cardboard rectangles (4" x 2")
- Hair-dryer
- Garbage bag

Setting up

- Spread out a garbage bag under the cookie sheet
- Sprinkle a thick layer of topsoil on the cookie sheet
- A small amount of water may need to be added to the soil

Demonstration 1 – Poor Soil Management

Objective: show how soil breaks down if left exposed to the elements.

If farmers till their soil and leave it exposed after harvest, sunlight will reduce the soil's moisture content, making it more susceptible to erosion. When winds blow over this topsoil, it will carry away some of it.

Use the hair-dryer to simulate wind over the soil. Some soil particles should fly off (onto the garbage bag), simulating the loss of nutrient rich topsoil.

Demonstration 2 – Mid Soil Management

Objective: show how management of the soil can reinforce nutrients and reduce erosion.

Rather than leaving tilled soil bare, farmers can ensure proper groundcover to insulate it. This could take the form of old crops, grass cuttings, or any other plant material they can acquire. This cover will have two effects: it reduces the evaporative effects of the sun, and reduces the effect that wind has on soil erosion.

Spread the shredded paper over the soil. This is meant to simulate plant clippings. Use the hair-dryer to simulate wind over the soil. Some soil particles and some shredded paper should fly off, simulating a reduction in lost topsoil.

Demonstration 3 – Good Soil Management

Objective: show further soil management.

Farmers can further reinforce their soil by reducing erosive forces like the amount of wind hitting the soil. If they plant trees in strategic areas they can reduce erosion by slowing down the wind and reinforcing top cover. These cardboard rectangles are 'windbreaks' (rows of trees along the edge of fields). This means less evaporation and less erosion.

Place the cardboard rectangles vertically in the soil to simulate windbreaks. Use the hair-dryer to simulate wind over the soil. Some soil particles and some shredded paper may fly off, but most should be retained by the windbreaks.

Wrap Up

Conclude the activity by sharing reflections on the wider scale of these measures as it relates to the Great Green Wall and Binta's story. When we see these activities in practice in Canada, we see them at an individual farm scale. The Great Green Wall contributes to good soil management, at a continental scale. Since the Great Green Wall is at a significantly greater scale, it has the added benefit of reinforcing the natural carbon cycle.

- What are some actions we can take to reduce our own impact on climate change?
- What are some actions we can take to support global communities as they address climate change?

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