WE Schools: Grow Together
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Suggested Time:
Activity 1: Understanding Food Insecurity (3 x 60 minutes),
Activity 2: How Sustainable Agriculture Supports Food Security
(2 x 60 minutes + time needed to take action)
Activity 3: Journey 2050 (6 hours)

Materials:
• Computer with Internet access
• Chart paper and markers

Learning Goals:
Students will:
• Develop an understanding of the consequences of food insecurity on individuals and families
• Explore the social, economic and environmental impacts of sustainable agriculture practices
• Gain the background knowledge to complete Journey 2050 programming

Activity 1: Understanding Food Insecurity
(3 x 60 minutes)

1. Begin the lesson by sharing the following statistic with students:
   In our world today, 821 million people do not have enough food
to live a healthy, active life.

2. To help students understand the size of this number, share
   the following comparisons or create comparisons relevant to students’ local context.
   821 million people:
   • Is 22 times the population of Canada
   • Is 333 times the population of greater Vancouver
   • Could fill the Olympic Stadium in Montreal 12,000 times

3. Explain to students that when people do not have enough
   nutritious food to live a healthy, active life, they are experiencing food insecurity.

4. Use the following questions to encourage students to begin
   to think about the impact the issue of global food insecurity is having on our world today:
   • How do you think the issue of food insecurity is connected to the issue of hunger?
   • What could be the potential impacts of food insecurity on children and adults?
   • Why do you think both malnutrition and obesity are considered consequences of food insecurity?
   • What did you learn about the issue of global food insecurity that you didn’t know before?
   • What surprised you most about this issue?
   • What are possible solutions that could support people affected by food insecurity?
   • What can you do as an individual to contribute to solutions to global food insecurity?

Enrichment: To continue the conversation about the impact of food insecurity, show students “A Global Food Crisis Might Be Less Than a Decade Away,” [www.ted.com/talks/sara_menker_a_global_food_crisis_may_be_only_a_decade_away?language=en](http://www.ted.com/talks/sara_menker_a_global_food_crisis_may_be_only_a_decade_away?language=en).

5. Divide students into five groups and assign groups one of the
   following global regions: Africa, Asia, Latin America and the Caribbean, Oceania, North America, and Europe. Challenge
   students to use the Understanding Food insecurity organizer
   to investigate what food insecurity looks like in their region

6. Encourage students to find out which communities in their
   region are affected by food insecurity, what the causes and
   impacts are, and what people might not know about food
   insecurity in this area. Provide students with the following
   links to support their research:
   • Food Security and Nutrition Around the World:

7. Invite students to present their findings to their class. They
   can create a digital presentation, or they can set up visual
   displays that the groups can rotate through.

8. Once students have had the opportunity to hear from each
   group, ask them to create an individual oral or written
   response to one or more of the following questions to
   demonstrate what they have learned about the issue of
   global food insecurity:
   • What did you learn about the issue of global food insecurity that you didn’t know before?
   • What surprised you most about this issue?
   • What are possible solutions that could support people
     affected by food insecurity?
   • What can you do as an individual to contribute to solutions
     to global food insecurity?
Activity 2: How Sustainable Agriculture Supports Food Security

(2 x 60 minutes + time needed to take action)

1. Encourage students to think back to the previous activity and ask them to share one thing they learned about the issue of food insecurity that they have continued to think about.

2. Share with students that they will be reading an article about how families in a rural area of India were affected by food insecurity and how sustainable farming practices are helping them to move “from surviving to thriving.”

3. Divide students into groups of four and explain that these will be their home groups. Give each student a number from one to four and ask them to join students with the same number to form expert groups.

4. In their expert groups, provide students with a digital or printed version of the article “Striking Out Hunger,” www.WE.org/stories/achieving-food-security-and-eliminating-hunger-in-india-with-traditional-farming, and assign each group one of the following questions.
   a. What is subsistence farming? How does it contribute to food insecurity?
   b. What changes did the farmers in Rajasthan make to their agricultural practices? What were the results?
   c. What impact have the new agricultural practices had on the farmers’ families?
   d. What are the next steps for these farmers? How will they help to support sustainable agricultural practices in their community?

5. Ask students to read the article and discuss their question. When they have had sufficient time, ask students to return to their home groups and share what they learned.

6. Individually, in small groups or as a class, watch one or more of the following videos to explore other examples of how innovative sustainable agriculture practices are helping to address issues of food insecurity around the world:
   • “Sustainable Farming,” threefarmers.ca/sustainable-farming/ (2:11)

7. Now that students have an awareness of the issue of food insecurity and an understanding of how sustainable agriculture practices can help to address this issue, encourage them to take action to support organizations and initiatives that promote these sustainable agriculture practices. Students can choose from one of the following suggestions or develop and idea of their own:
   • Host a food fair where students can make and sell products to raise money to donate to an organization they are passionate about. Encourage students to research the organization they want to contribute to and understand how this mission and vision aligns to their own purpose.
   • Host a lunch or dinner for students, staff and community members that features ingredients that are locally or nationally sourced, to support farmers in your country. Students can sell tickets to the event or ask for donations from participants and donate the proceeds from the event to organizations or initiatives that support the farming community.
   • Volunteer at a local food bank or other initiative that provides support for people in their community who are experiencing food insecurity.
   • Create a podcast or video series where students can interview experts in farming and food production or community organizers supporting local food security initiatives (e.g., food banks, breakfast programs). Encourage them to discuss topics and questions related to food insecurity to raise awareness for the importance of supporting sustainable agriculture practices. Students can share their podcast or videos on the school website or via social media.
**Enrichment:** To deepen students' understanding of the issue of food insecurity, encourage them to engage in an investigation into how food insecurity can be the catalyst for other social issues such as climate change, migration and war and conflict.

Provides students with the following links to spark their investigation:


**Educator's Note:** Provide students with an opportunity to learn more about the importance of sustainable agriculture by exploring the games, activities and resources from Journey 2050. To find out more, explore the Journey 2050 Program appendix.
Activity 3: Journey 2050

Journey 2050 allows schools around the world to develop their understanding about different agricultural practices. As students explore world food sustainability they make inquiry-based decisions to see the ripple effect on social, economic and environmental factors locally and globally.

Students will develop their skills and understanding through a virtual farm simulation and career avatar. This is a free program with classroom resources to support educators. The program was written with teachers to ensure it complements national standards and STEM curriculum, especially Grade 7 to 12.

1. Register online at journey2050.rnp.io/teachers/sign_up to access the program.

2. As students progress through the teacher-led lesson plans they will engage in discussions to answer the question: “How will we sustainably feed nearly 10 billion people by the year 2050?”

3. Each lesson contains a teacher guide, PowerPoint, video, game, enriching activities and service-learning:

   Lesson 1: Introduction (90 min)
   Students will be able to:
   • Understand world food sustainability challenges and opportunities
   • Describe the expected population growth between now and the year 2050
   • Identify agricultural products that must be provided by agriculture in order to accommodate a growing population
   • Explain what sustainable agriculture is using the sustainability barrel
   • Discover how the ripple effect can relate to sustainable agriculture and have a positive impact in our society
   • Understand the role food waste plays in our world

   Lesson 2: Plant Health (45 min)
   Students will be able to:
   • Identify nitrogen, potassium and phosphorus as primary soil nutrients
   • Describe various methods of replenishing soil nutrients
   • Discover how overall plant health impacts a plant’s ability to resist disease and pests
   • Describe the 4R Nutrient Stewardship System

   Lesson 3: Water Conservation (45 min)
   Students will be able to:
   • Discuss the limited amount of fresh water on earth and identify how best management practices can reduce water consumption
   • Discuss the need for water conservation and protection related to population growth and agriculture
   • Compare and contrast methods of irrigation for water conservation

   Lesson 4: Economics (45 min)
   Students will be able to:
   • Explain why economics are important to sustainability
   • Describe the relationship between a sustainable economy and the environment
   • Develop a model demonstrating how agricultural production creates a ripple effect that impacts local and global economies and social stability
   • Discuss how investments build an economy

   Lesson 5: Land Use (45 min)
   Students will be able to:
   • Recognize that arable land (ideal land for growing crops) is a limited resource
   • Identify best management practices that can be applied to every stakeholder’s land-use decisions
   • Analyze and discuss the impacts of food waste on our environment

   Lesson 6: Careers (45 min)
   Students will be able to:
   • Explore careers related to agriculture
   • Identify personal interests within agriculture or a related field
   • Discuss how agricultural professionals can impact world food sustainability

Summary (45 min)
The goal of Journey 2050 is to engage students in positive discussions about the importance of sustainable agriculture, best management practices and innovations.

Feeding the world is the responsibility of all. We need to think about the ways we act now so that future generations may prosper.

Food is life. Sustainable food is our future.

Quick links:
• Testimonial video: youtube/VdQPWMWmxaY
Enrichment: Farmers 2050 is a free farm game based on real agriculture. It uses the same sustainability concepts but is intended to be played at home or during school breaks.

• View video: www.youtube.be/dWxNwQKhbJg
# Understanding Food Insecurity

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<th>What region are you investigating?</th>
<th>What is the population</th>
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<th>What is the geography/climate of the region?</th>
<th>What are the primary industries (e.g., agriculture, manufacturing)?</th>
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<th>What percentage of the population is affected by food insecurity?</th>
<th>Which communities are most affected? Why?</th>
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<th>What are the main causes of food insecurity in the region?</th>
<th>What are the impacts/consequences?</th>
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Sources: