



## Sustainable Futures Virtual Field Trip

### OBJECTIVES

Students will:

- Understand how human behavior connects to food insecurity.
- Explain Earth's changing condition over time.
- Make connections between sustainability and the environment, food, and water.

### OVERVIEW

Climate change. Global warming. Greenhouse gasses. Sustainability. Students hear words like this all the time, but what do they actually mean? Young people understand that these things are important, but what can they **do** about it? What can they learn from the people and companies who are making a difference all over the world, pairing big goals with bold actions? Can **they** become agents of change? Students will explore these concepts and more in the **Sustainable Futures Virtual Field Trip**.

### MATERIALS

- Device with the ability to project, one per educator
- Device with access to the internet, one per student or group
- Pencil, one per student
- **Food Insecurity** student handout, one per student, or displayed electronically
- **Draw Conclusions—Food loss and Food Insecurity** student handout, one per student\*
- **Understanding Earth's Condition** student handout, one per student\*
- **WebQuest** student handout, one per student\*

**\*Note:** See the facilitation options throughout for tips on remote learning.

### USING THIS GUIDE

This supplemental guide will provide you with three optional activities to enhance your use of the Virtual Field Trip in your classroom. Use of the Virtual Field Trip is flexible—it can be

watched as a stand-alone resource, or you can facilitate one or more of the included activities. The “Before the Field Trip” activity should be completed before watching, and it will provide an opportunity for you to engage your students in the topics they will learn during the video. The “During the Field Trip” activity consists of a graphic organizer that students can use to keep track of their learning while they are watching the Virtual Field Trip. Finally, the “After the Field Trip” activity will provide students with a way to apply their learning or will challenge them to think about a topic in a new way after they watch the video.

**BEFORE THE FIELD TRIP** (45-60 MINUTES)

1. Engage students in the upcoming activities by asking one or more of the following open-ended questions:
  - What do you think the word “sustainable” means?
  - When thinking about the environment, what comes to your mind when you hear the word “sustainable”?
  - Does the word “sustainable” have anything to do with food?
2. Explain to students that the word **sustainable** means **having the ability to be maintained**. During the upcoming Virtual Field Trip, they will be introduced to various ways that professionals, industries, and kids, just like them, are trying to increase sustainability with regards to the environment, food and water.
3. Inform students that in today’s activity, they are going to focus on something called “food loss.” They will first learn a little about food insecurity and then draw conclusions about the relationship between food loss and food insecurity.
  - **Note:** Students may need help with the terms “food loss” and “food insecurity.” If that is the case, explain to them that **food insecurity** is **not having reliable access to a source or sufficient quantity of affordable or nutritious food**. **Food loss** refers to **once usable food that gets spilled, spoiled, thrown away, or is otherwise not eaten when it could have been**.
4. Distribute or display the **Food Insecurity** handout to each student. Ask volunteers to read the statistics to the class or read them out loud yourself. Give students the opportunity to share any initial reactions to what they see.
5. Invite students to think about the definition of food loss. Ask students to brainstorm what or who might be the biggest causes of food loss and write a list on the board as they answer. If no one offers an answer like, “restaurants, schools, grocery stores... etc.,” ask student to specifically think about food waste in their own home, or in places they visit.

**Facilitation Options:**

If your students are learning in a remote environment, consider the following:

1. Display the Food Insecurity handout via screen share.
2. Collect responses virtually via a learning management platform, live video, shared online document, photos, etc.

- Distribute a **Draw Conclusions—Food loss and Food Insecurity** handout to each student. Direct them to answer the prompts in paragraph form.
- If time allows, ask volunteers to share their conclusions. Otherwise, students can save their handouts for after viewing the Virtual Field Trip. Would they change their responses?

**DURING THE FIELD TRIP (45-60 MINUTES, INCLUDING THE VIDEO)**

- Remind students that sustainability affects multiple aspects of the environment as well as food and water.
- Distribute the **Understanding Earth’s Condition** handout. Read through the instructions.
- Read through each question, and explain that during the Virtual Field Trip, students will be recording instances and examples that they learn from the video.
- Play the **Sustainable Futures Virtual Field Trip** (add running time), reminding students to record their thoughts on their charts throughout.
- After the Virtual Field Trip, have students share a few of their ideas and reflect on their key takeaways.

Facilitation Options:

If your students are learning in a remote environment, consider the following:

- Use screen share to play the virtual field trip.
- Have students watch asynchronously and share their thoughts using the tool of your choice (learning management platform, shared online document, photo, etc.).
- Use live video conferencing or chat rooms to conduct a whole group discussion.
- Provide the graphic organizer for students to print at home and fill in as they watch independently.

**AFTER THE FIELD TRIP (45-50 MINUTES)**

- Reinforce what students learned in the video—that to be a change agent, one must set goals and work through the process of achieving them. Often that process involves using many of these skills you learn in school, like asking questions, problem solving, using data, and seeking solutions.
- Introduce students to the United Nations’ Sustainable Development Goals, or SDGs.<sup>1</sup> These goals evolved from the original Millennium Development Goals and seek to achieve what was not completed then.<sup>2</sup> Explain to the students that a great group of change agents got together to set lofty goals and determine plans for completion that included many stakeholders but still did not achieve their goals completely. Instead of giving up, the UN got back together, analyzed what went right and what still needed to be accomplished, and created new goals. These seventeen goals focus on the three dimensions of sustainable development: economic, social, and environmental.

References:

<sup>1</sup> <https://sdgs.un.org/goals>  
<sup>2</sup> <https://sdgs.un.org/2030agenda>

3. Let students know that while they explore all the seventeen goals in their WebQuest activity, today they should focus on the goals that specifically have to do with the environmental topics touched upon in the Virtual Field Trip.
4. Distribute one **WebQuest** handout to each student. Read through the instructions and each of the questions.
5. Introduce the SDGs website and how to navigate it. Make sure students can access the site. Give students time to explore and answer questions, either independently or in groups.
6. Invite students to share their conclusions with the class. As students share, be sure to highlight the importance of thinking globally. To extend the conversation, consider how thinking about the U.N. SDGs can help students better understand how interconnected people and communities are across the globe.

**Facilitation Options:**

If your students are learning in a remote environment, consider the following:

1. Introduce the WebQuest handout via screen share.
2. Collect responses virtually via a learning management platform, live video, shared online document, photos, etc.

**POSSIBLE LEARNING EXTENSIONS**

- Conduct a discussion on how many of the elements that students recorded about food loss are already common practice. Think of simple or attainable ways to decrease food waste among their classroom and their families. Encourage students to implement the strategies for a determined time and keep a journal of successes and failures. Come back together and reevaluate what they could change to be more successful.
- Explain to students that the UN believes that their goals are “integrated and indivisible,” which means they all work together for the greater good, and the whole cannot be successful without the success of each part.<sup>3</sup> Ask students if they agree and facilitate a discussion about whether the goals they chose during the research activity can be achieved in isolation of the others.

**NATIONAL CONTENT STANDARDS ALIGNMENT  
FOR SUPPLEMENTAL ACTIVITIES****CCSS in English Language Arts**

CCSS.ELA-LITERACY.SL.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners, building on others' ideas and expressing their own clearly.

CCSS.ELA-LITERACY.SL.1.C: Pose and respond to specific questions to clarify or follow up on information and make comments that contribute to the discussion and link to the remarks of others.

References:

<sup>3</sup> [footnote missing](#)

CCSS.ELA-LITERACY.SL.1.D: Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.

CCSS.ELA-LITERACY.W.2.D: Use precise language and domain-specific vocabulary to inform about or explain the topic.

CCSS.ELA-LITERACY.W.7: Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.

### **Next Generation Science Standards**

MS-ESS3

- Understand how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.
- Understand the need for monitoring and minimizing a human impact on the environment.
- Understand that increases in human population and per-capita consumption of natural resources impact Earth's systems.
- Understand the factors that have caused the rise in global temperatures over the past century.



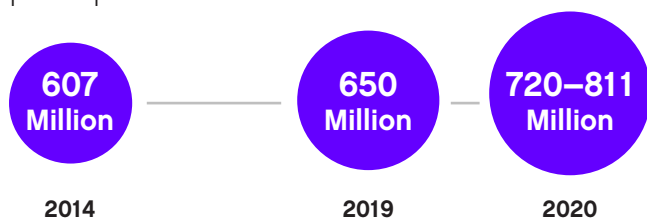
**End hunger, achieve food security and improved nutrition, and promote sustainable agriculture**

The global pandemic is exacerbating world hunger



Worldwide, an additional **70-161 Million People** are likely to have experienced hunger as a result of the pandemic in 2020

Number of undernourished people in the world



Pandemic will worsen child malnutrition

**22%** (149.2 Million)

of children under 5 **are stunted**

**6.7%** (45.4 Million)

of children under 5 **suffer from wasting**

**5.7%** (38.9 Million)

of children under 5 **are overweight** (2020\*)

\*These 2020 estimates do not reflect impact of pandemic.

Almost **one-third of women** of reproductive age globally suffer from anemia, in part due to **nutrition deficiencies**.

**2.37 Billion People**

are without food or unable to eat a healthy balanced diet on a regular basis. (2020)



[The Sustainable Development Goals Report 2021](#)

1. Does food-loss affect the problem of food insecurity? Explain.

2. Would decreasing food-loss help solve the problem of food insecurity? Explain.

Directions: As you watch the Virtual Field Trip, use the chart below, and on the following page, to record what you learn about each topic.

<p><b>What are some reasons that CO2 emissions have skyrocketed in recent history?</b></p>
<p><b>What are some current results of those increased CO2 emissions?</b></p>



**What can you do to help the food-loss problem?**

Blank space for student response to the question: "What can you do to help the food-loss problem?"

**Take notes on the important elements of setting and reaching a goal:**

Blank space for student notes on the important elements of setting and reaching a goal.



4. List each goal you highlighted and explore it more deeply on the website. Then, explain how it relates to what you experienced in the Virtual Field Trip:

Goal	How it relates to the Virtual Field Trip

5. Draw conclusions. Based on your investigation, which SDG do you feel is most crucial to address first? Use information from the website and the Virtual Field Trip to support your answer.