

Global Teacher Seminar Lesson Plan

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Title: The Relationship Between Human Activities and Food Security (an Introductory Lesson)

Theme/Topic: Human Development, Food Security, Sustainability

Introduction: A number of factors such as human activities impact food security at the local, regional, national, and international level. From direct links through food systems to indirect links through climate change, food security is a global issue. To better understand the United Nations Sustainable Development Goal (#2) on “Zero Hunger”, it might help students to start with an exploration of the factors leading to food security.

Subject(s)/Grade level(s): Social Studies, Interdisciplinary Studies; 9-12

Suggested Duration of Lesson: 2 days; about 50 minutes

Connection to Standards/Common Core:

11. Decisions about human activities made by individuals and societies have implications for both current and future generations, including intended and unintended consequences.

Essential Questions:

What is food insecurity?

What factors might lead to issues of food insecurity?

What relationship exists between food insecurity and human crises in the world?

Learning Objectives (2-3 objectives):

Students will be able to:

- define food insecurity.
- identify and explain examples of food insecurity in the world today.
- identify and explain a basic relationship between food insecurity and global issues such as climate change and conflicts around the world.

Materials Needed:

Access to the Internet; Printed copies of articles or relevant information, such as infographics, if necessary.

Pre-Assessment of Prior Knowledge:

Group discussion or students starting class with a brainstorm about the main terminology and concepts. Students review with one another terms and relationships to be addressed in the lesson (e.g. what is

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climate change, food insecurity, identifying factors that might impact). Most students in a heterogeneous, high school level class should have a basic awareness of the climate change issues from previous courses and conversations.

Teacher-Student Interaction (5-7 steps):

Day One

1. Begin presentation with a teacher created slide presentation of images (suggested 8-12) from around the world. The theme is a changing food system impacted by human activities leading to problems with food security. Any images that show these three concepts will spark thoughts, but the images should be clear and easily identifiable. Images might range from food waste in landfills (worldwide), which produce methane, to locust infestations in east Africa destroying crops. They may show increased pricing due to conflicts in areas (e.g. wheat shipments relating to Ukraine 2022; migration of people out of North Africa or other areas) or even increased precipitation due to climate change leading to crop failures in Guatemala. Students may loosely converse as a class about what they think is happening in the images or discuss based on teacher prompts.
 2. Transition to a video explaining what is food insecurity or look at a reading together. Teacher's preference based on the class.
 - a. Video: [State of Food Security and Nutrition in the World 2022- Interview with FAO Chief Economist](#) is one example but many exist offering different styles of graphics and information appropriate for different types of learners.
 - b. Example Reading:
 - i. *Hunger and Food Insecurity* from the FAO (Food and Agricultural Organization of the United Nations) <https://www.fao.org/hunger/en/>
 - ii. *Food Security Information for Action Practical Guides* from the FAO (Food and Agricultural Organization of the United Nations) <https://www.fao.org/3/al936e/al936e.pdf>
 3. Brainstorm the “whys” of food insecurity. Teachers may ask or post questions asking students to identify as many reasons why food insecurity occurs including big picture concepts like “climate change” to specific examples such as “crop loss due to wild animals losing natural habitats” or “industrial contamination of water in XYZ.” Record ideas on a board or in another way so that students can see all of the suggestions.
 4. *Teacher presents the concept of “Zero Hunger”* - this is the second goal in the United Nations' Sustainable Development Goals. Ask students, “Is Zero Hunger possible in the world?” Students share thoughts.
 5. Class reviews article (World Food Programme: <https://www.wfp.org/global-hunger-crisis>), video, or presentation explaining the main causes of food insecurity in the world today: Conflict, Climate Shocks, Covid-19 ramifications, and Cost
- This will either end Day One or carry over into the beginning of Day Two. Students could look at the information as a homework assignment. —

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Day Two

6. Review the 4 Factors leading to Food Insecurity in the present day.
7. Lesson shifts to exploring specific examples of what is happening in the world and identification of which “Factors leading to Food Insecurity” (FLFP below) under which it falls.
 - a. Students log in to Visual Capitalist’s Interactive Map Tracking Global Hunger and Food Insecurity (<https://www.visualcapitalist.com/interactive-map-tracking-global-hunger-and-food-insecurity/>)
 - b. With the FLFP’s listed or posted, students explore areas of the world and try to identify the factors leading to the challenges in those areas.
 - c. Students may have goals to accomplish during the exploration such as looking at the data of a certain number of places or to find an example of each FLFP.
 - d. Discussion during the exploration is encouraged if there is no specific task to complete
8. Students share what they found and are encouraged to address any connections in data.
9. Teacher facilitates a summary discussion on the complexity and interconnectedness of the issue of food security and the human impact. While this discussion will not be comprehensive, it should be used to address the learning objectives for the class. This is a good time to loop back to the concept of “Zero Hunger” and prepare for the next lessons in this study which may go further into human impact, climate change, sustainability, or other projects focused on addressing the concept of zero hunger in the world.
10. Explain Exit Slip to show student understanding (see Closing Activity)

Closing Activity:

The summary discussion in step 9 is a closing activity, but to check for understanding in each student, an Exit Slip Activity is suggested. This may be a paper with one or two questions to answer before leaving class, a similar reflection to complete at home, or an online discussion question to answer before the next class.

Post-Assessment:

Since this lesson is meant to be more of an introduction to the topic, demonstrating understanding might be best served through a formative assessment such as a class discussion that carries over into the next day to link lessons, an exit-slip, or later in the unit through a larger review. Students may do anything from creating a mind-map (brainstorm) to show the connections through words or images to simply explaining the challenges to answer two or three direct questions. The assessment does not have to be complex at this point because the lesson leads to deeper understanding of food insecurity, its complex causes, and possible short and long-term solutions.

Reflection: Throughout the entire study students examine images, stories, and examples from around the world. They are challenged to make meaningful connections between prior knowledge and new

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learning. The media used shows global examples as well as the data collected on the Interactive Map. Finally, through teacher facilitated information shared and discussion, the students should be keeping a global and diverse perspective in mind throughout the lesson.

Resources:

Climate Change, Global Food Security, and the U.S. Food System

<https://www.youtube.com/watch?v=v24wT16OU2w&t=172s>

Extra Sources for Students interested in different data:

U.S. Government Accountability Office: Global Food Security Interactive Map

<https://files.gao.gov/multimedia/gao-21-47r/interactive/index.html>

Food Security Information for Action Practical Guides from the FAO (Food and Agricultural Organization of the United Nations) <https://www.fao.org/3/al936e/al936e.pdf>

Hunger and Food Insecurity from the FAO (Food and Agricultural Organization of the United Nations)

<https://www.fao.org/hunger/en/>

United Nations Sustainable Development Goals: Goal 2 Zero Hunger

<https://www.un.org/sustainabledevelopment/hunger/>

Visual Capitalist: Interactive Map Tracking Global Hunger and Food Insecurity

<https://www.visualcapitalist.com/interactive-map-tracking-global-hunger-and-food-insecurity/>

World Food Programme: <https://www.wfp.org/global-hunger-crisis>

Extension Activities/Extending the Lesson/Cross-Curricular Connections:

Extension may range from students seeking out further examples of the impact human development has on food production, distribution, or consumption as well as more time spent pursuing the work done by local, national, and international organizations to address the problem. The work of organizations to address these issues encompasses another Learning Standard (13) as well.

Future lessons may build on cross-curricular studies with science courses to look at components of water and energy sources (soil, nutrients, fertilizers, changing climate, etc) and how they impact food production. Another option would be to pursue an understanding of greater human development systems (urbanization, deforestation, etc.) and how they put further pressures on food security issues. Students may benefit from individual projects allowing them to pursue their own areas of interest as it relates to this topic. This could be a week-long “research and present” project or even a longer multi-faceted capstone-like project.
