

## Global Hunger and Food Security

### Teacher Toolkit

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## Teacher Foreword

Ending global hunger is one the greatest challenges and opportunities of our time. More than 800 million people across the world go to bed hungry each night. To meet the needs of a growing population, the world will need to produce more food with less water and land and limited natural resources. Hunger and poverty are inextricably linked, robbing people of healthy and productive lives and stunting the mental and physical development of future generations. And while the world has made progress in reducing global hunger and poverty, there is still more to do.

As America's global hunger and food security initiative, Feed the Future works to give families and communities in some of the world's poorest countries the freedom and opportunity to lift themselves out of poverty and hunger, helping them along their own journey to self-reliance. Feed the Future brings together partners from across sectors and the U.S. Government to use each of our unique skills and insights in a targeted, coordinated way to help countries that are ripe for transformation change the way their food systems work.

Today's youth will play a critical role in making the vision of a food-secure future a reality. This toolkit is designed to help teachers like you introduce the topics of food security, global hunger, nutrition and agriculture to the next generation of leaders who can contribute to solving hunger. It provides some tools and resources to inspire your middle and high school students to learn more about this issue and how they can explore solutions within their own schools and communities.

### Toolkit Components

This toolkit includes the following components designed to help incorporate global hunger and food security topics into your curriculum:

- **Lesson Plans and Activities** – a compilation of food security, global hunger, nutrition and agriculture-related lesson plans for middle and high school students; includes information on meeting Common Core requirements
- **Additional Resources** – links to additional global hunger and food security websites and resources for students and teachers
- **Feed the Future Week Ideas** – ideas for how teachers and students can tangibly engage with global hunger issues through participation in the annual Feed the Future Week

## I. Lesson Plans and Activities

*Pulling from a variety of existing lesson plans and activities from publicly available government and educational resources, the list below provides an easy-to-use compilation of lesson plans and activities related to food security and agriculture. Note: Prep time for lesson plans vary.*

Grade(s)	Activity	Common Core Requirements	Estimated Time	Links
6 – 8	<b>Food Systems Feed the World</b>  Students explore the steps and processes that create a food system and gain an understanding of hunger as it relates to the physical well-being, culture, and geographic location of all people. Students learn what a food system encompasses, create a "food system chain," and discuss why hunger still exists despite modern advances that have made the U.S. food system highly efficient.	<b>Language: Anchor Standards</b> CCSS.ELA-LITERACY.CCRA.L.6	1 hour	<a href="#">Link</a>
	<b>Chain of Food</b>  Students explore the path food takes along the farm-to-table continuum. They begin on the farm and investigate food safety issues during processing, transportation, at restaurants and supermarkets, and, finally, in their own homes. Teams identify how food can become contaminated along the continuum and	<b>Speaking and Listening: Anchor Standards</b> CCSS.ELA-LITERACY.CCRA.S.L.1  <b>Language: Anchor Standards</b> CCSS.ELA-LITERACY.CCRA.L.3 CCSS.ELA-LITERACY.CCRA.L.4	45 minutes	<a href="#">Link</a>

	develop and present strategies for preventing contamination at each step.			
	<b>AgVenture: Sourcing Ag Careers</b>  Students consider the scope of careers related to the science, art, or practice of agriculture and examine career opportunities that are part of the five agricultural pathways.	CCSS.ELA-LITERACY.CCRA.L.6	Two or three 45-minute sessions	<a href="#">Link</a>
	<b>The Hunger Obstacle Course</b>  This activity engages participants in creative problem solving through a time-limited process of generating solutions to different hunger-related problems. Small groups of students circulate around the room and write down solutions to each of the hunger obstacles.	Not available	30-minute activities	<a href="#">Link</a>
	<b>Where Does Your Food Come From?: An Augmented Reality Lesson</b>  Students create an augmented reality video using a smartphone application (app) to educate consumers about where their food comes from.	<b>Speaking and Listening: Anchor Standards</b> CCSS.ELA-LITERACY.CCRA.S.L.1 CCSS.ELA-LITERACY.CCRA.S.L.4 CCSS.ELA-LITERACY.CCRA.S.L.5 CCSS.ELA-LITERACY.CCRA.S.L.6  <b>Writing: Anchor Standards</b>	50 minutes	<a href="#">Link</a>

		CCSS.ELA-LITERACY.CCRA.W.7 CCSS.ELA-LITERACY.CCRA.W.8		
9 – 12	<b>Agricultural Land Use</b>  Students explore the impact of fertilizer on algae growth, soil erosion, and agricultural soil and water conservation practices.	<b>Reading: Anchor Standards</b> CCSS.ELA-LITERACY.CCRA.R.10 CCSS.ELA-LITERACY.CCRA.R.7  <b>Speaking and Listening: Anchor Standards</b> CCSS.ELA-LITERACY.CCRA.S.L.1  <b>Mathematics: Practice Standards</b> CCSS.MATH.PRACTICE.MP3	Three 60-minute activities	<a href="#">Link</a>
	<b>Feeding a Digital World: From Farm to Fork</b>  Using an interest-based approach in teams, students create a "farm-to-fork" video to educate consumers about where their food comes from.	<b>Speaking and Listening: Anchor Standards</b> CCSS.ELA-LITERACY.CCRA.S.L.1 CCSS.ELA-LITERACY.CCRA.S.L.4 CCSS.ELA-LITERACY.CCRA.S.L.5 CCSS.ELA-LITERACY.CCRA.S.L.6  <b>Writing: Anchor Standards</b> CCSS.ELA-LITERACY.CCRA.W.7 CCSS.ELA-LITERACY.CCRA.W.8	90 minutes	<a href="#">Link</a>
	<b>Agricultural Production Regions in the United States</b>	<b>Reading: Anchor Standards</b> CCSS.ELA-LITERACY.CCRA.R.7  <b>Writing: Anchor Standards</b>	Two 50-minute class periods	<a href="#">Link</a>

	Students investigate U.S. crop and livestock production and analyze the relevance of land use models in contemporary agricultural production.	CCSS.ELA-LITERACY.CCRA.W.2 CCSS.ELA-LITERACY.CCRA.W.7 CCSS.ELA-LITERACY.CCRA.W.7 CCSS.ELA-LITERACY.CCRA.W.8		
	<b>Filling the Global Grocery Bag</b>  Students learn what factors affect a country's ability to produce their own food and how food expenses differ throughout the world.	<b>Reading: Anchor Standards</b>  CCSS.ELA-LITERACY.CCRA.R.1 CCSS.ELA-LITERACY.CCRA.R.4 CCSS.ELA-LITERACY.CCRA.R.8	90 minutes	<a href="#">Link</a>
	<b>Global Food Security</b>  Students explore the causes of hunger, both domestically and globally; evaluate potential solutions for solving world hunger; and forecast the impact of a growing world population on current food supplies.	<b>Reading: Anchor Standards</b>  CCSS.ELA-LITERACY.CCRA.R.1 CCSS.ELA-LITERACY.CCRA.R.2 CCSS.ELA-LITERACY.CCRA.R.7 CCSS.ELA-LITERACY.CCRA.R.8	Two 50-minute class periods	<a href="#">Link</a>

If you have additional time and interest, please use below links to find more lesson plans and activities, including:

- [National Agriculture in the Classroom Curriculum](#)
- [Peace Corps Educator Resources](#)
- [World Food Program Classroom Activities](#)

## II. Additional Resources

*The additional resources below can be used to supplement the activities and lesson plans listed above. Ranging from outside reading to interactive web activities to multimedia components, the list below includes a range of interesting and engaging resources for both students and teachers.*

### **Feed the Future Website**

Feed the Future has shown that progress on ending hunger is possible. We regularly share stories, progress reports and videos of our partners' investments in agriculture, resilience and nutrition on our website. These snapshots capture the progress made to help millions of families around the world lift themselves out of hunger and poverty. You can also sign up for the Feed the Future newsletter to stay up-to-date on the initiative.

### **Agrilinks Website**

This website contains technical content and case studies that can provoke discussion among your students. Check out the "Events" tab for regular updates on events and webinars you can join, or work together as a class to create a post for the "Discussion" boards and engage in the global #endhunger conversation.

### **If The World Were a Village, David. J. Smith**

Imagine if the entire world's population were compiled into a village of 100 people. What would the demographics of that village be? This book helps students understand the similarities and differences of a global society, including the languages they speak, where they live, how much money they earn daily, and if they can read and write.

### **The Hungry Planet, Peter Menzel**

In 2000, the author began research for this book on the world's eating habits. Each family was asked to purchase a typical week's groceries, which were artfully arrayed—whether sacks of grain and potatoes and overripe bananas, or rows of packaged cereals, sodas and take-out pizzas—for a full-page family portrait. A detailed listing of the goods, broken down by food groups and expenditures are shown, then a more general discussion of how the food is raised and used, illustrated with a variety of photos and a family recipe. While the photos are extraordinary—fine enough for a stand-alone volume—it's the questions these photos ask that make this volume so gripping. This is a beautiful, quietly provocative volume.

### **TEDMED Talk: What Does the World Eat?**

Peter Menzel is a freelance photojournalist known for his coverage of international feature stories on science and the environment, and his wife Faith D'Aluisio is a former award-winning television news producer. In this 14-minute talk, Menzel discusses the projects they have undertaken together, including publishing *The Hungry Planet*. He further explores the changes they have observed in what and how people eat around the world, touching on issues such as obesity and food security.

### **40 Maps that Explain Food in America**

A collection of maps and graphs that represent farms, food production, and many other statistics in the United States. These maps provide excellent illustrations for students to understand how climate and geography affects the production of food as well as to provide statistics about the economics of food production through the years and across the United States.

### **Feeding the World: Can global crop production meet future demands?**

Crop production will have to double by 2050 to fulfill the needs of a growing and increasingly affluent population. This interactive map allows students to view current crop yields throughout the world, see which countries have yield gaps, identify existing water use efficiency, and recognize how crops are used throughout the world.

### **Nine (+) Infographics that Will Help You Teach Hunger**

Between the statistics and vocabulary often used to describe it, teachers know the scale of global hunger can be a challenge to help students understand. The following “infographics”—visual aids explaining complicated topics—explain world hunger and break the topic down.

### **Growing Today for Tomorrow**

Farmers have the biggest job on earth. The population is increasing—yet farmland isn't—so farmers have taken on the responsibility of producing more high-quality crops with fewer resources. This 3.5-minute video illustrates the remarkable improvements that have been made in agricultural efficiency and productivity while bringing home the challenges that the future holds. The attention-grabbing message makes for a great introduction to any lesson on agricultural production or careers in agriculture.

### **Planet Food Online**

Have your students discover their own global food network by playing Planet Food—a two-part interactive game that introduces the concepts of interdependence and globalization through the geography of food. In part one, students see the ways food on their plate creates a map that criss-crosses the world. Part two will call on their critical thinking and geographic decision-making skills in an investigative journey as they consider different values and points of view while making a bar of chocolate.

### **National Geographic: What the World Eats**

Do you know which country in the world consumes the most daily calories? Which country consumes the most bread or meat? View a series of pie graphs representing countries throughout the globe to answer these questions and more. Each graph displays the typical diet from that country broken down into food groups such as produce, dairy & eggs, meat, sugar & fat, and grains. You can also see how diets have changed from the year 1961 until the present.

### **The Future of Farming & Agriculture Video**

Farming is being revolutionized by a technological wave. This 12-minute video highlights technological advancements in both animal and plant agriculture. Learn how drones, robots, GPS systems, hydroponics, vertical farming systems, and more can help grow and harvest crops more efficiently. You can also see tools used in livestock production such as activity monitors, thermal imaging tools, and 3-D imaging which assist farmers in keeping their animals healthy.



### III. Feed the Future Week

#### Overview

Feed the Future Week – which occurs every year during the second week in September – celebrates progress made in the effort to end global hunger by Feed the Future,, and its partners throughout the United States and the world.

The week features online and in-person discussions and activities about what it will take to #endhunger and what people are currently doing and can do about it.

Consider participating in Feed the Future Week by planning some of the following activities in your classroom.

#### School Activities

##### Defining Hunger

In groups of 4-5, have students brainstorm ideas about the definition of hunger. Ask participants to think about any time they have “hungered” for anything, and ask a few supporting questions such as, “What physical effects did the person experience?” or “What mental and emotional effects were experienced? Have you ever experienced anything like that?”

After a short discussion, refer to the definition of hunger below. Compare this definition to those of the group’s and discuss all the definitions of hunger. Can they imagine what it would be like to be hungry consistently?

Definition: Hunger is a condition in which people do not get enough food to provide the nutrients (carbohydrates, fats, proteins, vitamins, minerals and water) for fully productive, active lives.

##### #EndHunger Cards

Print out copies of the [#endhunger cards](#) from Feed the Future and ask students to complete the sentence with their ideas on how they can contribute to the efforts to fight hunger on a local, regional and global level.

##### What Does it Cost?

Print or cut out sample grocery ads across all food groups to display how much nutritious food costs. Have students separate into groups and “go shopping” as they try to figure out how to buy good food for a family on a limited budget. Have each group present their purchases and budget breakdown following the simulation and have a group discussion around the difficulties they faced.

##### Visiting Your Local Food Bank

Contact a local food bank and schedule a time to have your class visit the site and learn about hunger in your own community. Develop a deeper understanding of the hunger burden in your own community and understand ways that students can help address it.

### **Feed The Future Country & Program Report**

Have students select a Feed the Future target country, found on [our website](#), and prepare a 2-page report on the national state of food security and the efforts underway to fight hunger in that country.

## **Community Connections & Supplemental Activities**

### **Feed the Future Speaker**

Invite a local Feed the Future volunteer, such as a Farmer-to-Farmer or Peace Corps volunteer, to visit your classroom and share his/her experience with students. You can also have students visit the Partners section on the [Feed the Future website](#) and select a local partner to invite to visit your classroom and share more about how their university, company, research, nonprofit, etc. are doing to help end global hunger, and why that matters for your state.

### **College Agricultural Department and Partner Visits**

Plan a field trip for your class to visit the agricultural department of one of Feed the Future's many [university partners](#). Alternatively or in addition, you can visit a [local business partner](#) of Feed the Future. Require each student to come up with a question to ask both the agricultural department members and business partners about their careers. Students could then write a two-paragraph summary of what they learned while visiting the department or business.

### **How Well Do You Know Your Local Kitchens?**

Although students are familiar with food service personnel from a serving standpoint, most students (and parents!) are not aware of what goes into the actual preparation of meals. A tour of a school cafeteria kitchen, a local restaurant or food court along with the kitchen operations would help students understand how meals are prepared, how food is transported and how much waste there is as a result. Host a discussion with students afterward to discuss what they learned, what surprised them, and ways they can help reduce food waste in their everyday lives.

### **A Visit to Your Local Farm**

Have students visit a local farm that supplies them with their produce. Have the farmer explain the growing process and how food ends up on their plate, including any global aspects.

### **Agricultural Career Fair**

Organize a local agricultural career fair, inviting agricultural specialists such as beekeepers, botanists, forest rangers, landscapers, water conservationists, farmers, wildlife biologists, etc. to discuss their career path and day-to-day working environment. Have students come prepared with questions to ask the specialists.