**Lesson One: Introduction to Food Security - Reading and Discussion**

Food security is a foreign concept to many Americans. Many Americans believe that chronic hunger and malnutrition happens only to people in developing nations or to the homeless. They have no concept that 1 in 6 people in this nation go hungry daily and do not have food security. And yet to some of our students, lack of food security is a very real thing to them because they are living that reality. Consequently, this is a subject that must be approached with great sensitivity and care with students.

**Student Misconceptions**:

* Food insecurity only happens “over there” and does not exist in this nation,
* it is such a large problem that does not affect them
* there is nothing they can do about it or should do about it,
* not having food is the fault of the hungry person
* The solution to the food crisis is simply growing more food

**Goal:** to introduce students to the concept of food security and have them start to build a conceptual framework of what food security is and is not, and to begin to understand that there are many issues surrounding food security. Poverty is only one. Biology and environmental factors are directly linked to food security.

**NGSS:** HS-LS2D Social Interactions and Group Behavior

**Before class,** download FrontLine and have it ready to play….: Poor Kids, by Jezza Newman at video.pbs.org/video/2306814133

**Lesson:** Before introducing the lesson, have students number off 1-6 and have them remember their number. Ask students if they have every heard the term **Food Security,** and ask what they believe the term means. There is no right or wrong answer at this point. Randomly call out a number and have those students stand. Have students look around the room at the NUMBER of students standing, not who are standing. Explain to students that this is number of **American** **kids** EVERY DAY in one classroom who may go without food and do not know if they will get to eat food that day. Have them look at the number of students again, and then have the students sit down. Call out 2 different numbers and have students stand. This is the number of people in **Rwanda** who will not eat today. 1 in every 8 people on this planet will not eat today. Those numbers are staggering in size!

Introduce the video to the class as a look at poverty and hunger through the eyes of 3 very real American children, and how they feel about the situations they find themselves in. After the video, ask students to think about their original ideas around food security, and how would they define it now. Lead a class discussion to come up with a class definition, and then compare that to the definition given by the World Health Organization. See below: Begin leading the class into the idea that food security is not just an American issue, but world-wide, and is not just about growing more food or poverty.

**World Health Organization Definition of Food Security**

The World Food Summit of 1996 defined food security as existing “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life”. Commonly, the concept of food security is defined as including both physical and economic access to food that meets people's dietary needs as well as their food preferences. In many countries, health problems related to dietary excess are an ever increasing threat, In fact, malnutrion and foodborne diarrhea are become double burden.

<http://www.who.int/trade/glossary/story028/en/>

**Wrap Up Activity and prep for formative assessment:** Have students remember the numbers they first counted off with. Remind them that 1 in 6 Americans will go hungry today and that 1 in 3 Rwandans will go hungry. That is TODAY, at our current world population of 7.5 billion people on the planet. By 2050, there will be over 9.5 billion people! Ask student numbers 1-4 to stand up. The number standing represents the number of people on the planet right now. 1 in every 8 of these people go hungry on the planet. Now ask the number 5’s to stand. This represents the population growth by 2050! That does not leave much room left! Think about the resources each of these people will need. This leads into the Formative assessment question.

**Formative Assessment::**  The population of the planet is growing very quickly. Is the answer to the problem of growing food insecurity in a growing population simply growing more food? Justify your answer.

We will be getting back to the ideas that the answers are far more complex than just being an issue of the poor or to simply grow more food in Lesson Two, introducing the Stakeholders.

**Further background information to add to the discussion**:

Food security is built on three pillars:

* Food availability: sufficient quantities of food available on a consistent basis.
* Food access: having sufficient resources to obtain appropriate foods for a nutritious diet.
* Food use: appropriate use based on knowledge of basic nutrition and care, as well as adequate water and sanitation.

Food security is a complex sustainable development issue, linked to health through malnutrition, but also to sustainable economic development, environment, and trade. There is a great deal of debate around food security with some arguing that:

* There is enough food in the world to feed everyone adequately; the problem is distribution.
* Future food needs can - or cannot - be met by current levels of production.
* National food security is paramount - or no longer necessary because of global trade.
* Economic Globalization may - or may not - lead to the persistence of food insecurity and poverty in rural communities.
* Increasing food production to meet future growing population demands may or may not lead to increased negative environmental impacts.
* Climate change may or may not make agricultural production more difficult

Issues such as whether households get enough food, how it is distributed within the household and whether that food fulfils the nutrition needs of all members of the household show that food security is clearly linked to health.

Agriculture remains the largest employment sector in most developing countries and international agriculture agreements are crucial to a country's food security. Some critics argue that trade liberalization may reduce a country's food security by reducing agricultural employment levels. Concern about this has led a group of World Trade Organization (WTO) member states to recommend that current negotiations on agricultural agreements allow developing countries to re-evaluate and raise tariffs on key products to protect national food security and employment. They argue that WTO agreements, by pushing for the liberalization of crucial markets, are threatening the food security of whole communities. Related issues include:

* What is the net impact of the further liberalization of food and agricultural trade, considering the widely differing situations in developing countries?
* To what extent can domestic economic and social policies - and food, agricultural and rural development policies - offset the diverse (and possibly negative) impacts of international policies, such as those relating to international trade?
* How can the overall economic gains from trade benefit those who are most likely to be suffering from food insecurity?
* Do gains “trickle down” to enhance economic access to food for the poor?
* How can food and agricultural production and trade be restrained from the over-exploitation of natural resources that may jeopardize domestic food security in the long term?
* How to ensure that imported food products are of acceptable quality and safe to eat?

**Additional Resources:**

[**www.wri.org/publication/great-balancing-act**-used](http://www.wri.org/publication/great-balancing-act-used) in lesson 4

[**www.sciencemag.org/content/309/5734/570/F2.expansion.html**](http://www.sciencemag.org/content/309/5734/570/F2.expansion.html)

[**http://www.fao.org**](http://www.fao.org/docrep/018/i3434e/i3434e/pdf) **loaded with lots of great information**

[**http://www.un.org/en/sustainablefuture/food.asp**](http://www.un.org/en/sustainablefuture/food.asp)

www.unglobalcompact.org search for Scaling Up Food and Agriculture

**http://www.fewresources.org** click on the energy tab and you will see the article: farms\_feedlots\_forests\_climate\_change\_issues.html

**Some further issues to think about:**

* 1. There are hungry people now, both in the US and worldwide.
  2. The global population is growing rapidly. Current population is estimated at 7 billion people now and to expand to 9 billion by 2050. Do Homo sapiens have a carrying capacity like other organisms do?
  3. Can this problem be solved by simply growing more food? Just as in any system, there are limiting factors and tipping points. There are some huge issues dealing with natural resources and agricultural degradation of the environment to consider, as well as climate change in general.
  4. What input do stakeholders have? Is that input equally considered in policy making?
  5. How robust and resilient is our food supply now?