FOOD SECURITY INNOVATIONS
Outplay Hunger Through Technology and Systems-Level Thinking

Lesson Title

Food Security Innovations: Outplay Hunger through Technology and Systems-Level Thinking

Overview

Explore topics of innovation, technology, and systems-level thinking to take action and tackle the hunger crisis – today and for the future!

Lesson information

- Grades: 5-12
- Content areas: All
- Time: 1 class session (approximately 60-90 minutes)

Objectives

1. Understand the global food crisis and the concept of "food systems"
2. Explore innovations and technologies that are advancing and scaling up solutions to combat hunger.
3. Consider the roles of innovation and technology on food security.
4. Employ skills of empathy, creativity, problem solving, and teamwork to address a real-world problem

Resources

- <u>Hunger Hotspots</u>: FAO-WFP early warnings on acute food insecurity, June to October 2024 outlook (<u>PDF of report</u>)
- Introduction to <u>food systems</u>
- Connections to <u>Innovation and Technology</u>
- <u>EarthProject app</u> for students (iOS and Android) and <u>top tips for teachers</u>

Lesson Plan	
Time	**Activity**
10 minutes	Introduction Consider the concept of **food security** as defined by the Food and Agriculture Organization (FAO) and the World Food Programme: *Food Security: A situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. There are usually four dimensions of food security: food availability, food access, food utilization and stability over time. (<u>FAO and WFP, 2024</u>)* As a group, take a look at the Hunger Hotspots document for June-October 2024 as released by FAO and WFP: <u>PDF of report</u> and <u>digital map</u> - Consider the map on page iv and the graphic on page 6. How does your country compare to the countries listed? - Select one "hot spot" country and review the status and recommended responses (pages 12-29). - Discuss the impact at a systems-level. Considering the definition of food security, how does the impact on one country affect all others on a planet? How might action in one location create change in another place? <u>Hunger Hotspots</u>: FAO-WFP early warnings on acute food insecurity, June to October 2024 outlook

5-10 minutes	**Inspiration** People are turning to technology and innovation as solutions to fight hunger and support food security. Check out these innovations: • <u>HungerMap Live</u>: a real-time, AI-powered platform that monitors food security around the world • <u>Solar 4 Resilience</u>: Solar-based technologies for building resilience and livelihoods of female smallholder farmers in India • <u>Takachar</u>: Portable machines that turn agricultural waste into sellable bioproducts and limit the effects of climate change
20-40 minutes	**Design Sprint** Divide the class into teams. Pose a design challenge for them to quickly tackle. Proposed solutions do not need to be fully fleshed out – think messy and conceptual as opposed to polished and concrete. Creativity and "big, bold ideas" encouraged! Take 20 minutes to map out a proposed solution using innovation and/or technology to address food security either in a "hot spot country" or a local area that is relevant to the group. Engage in quick discussions and brainstorming then visualize the idea with a sketch/simple prototype. Make sure you can answer the question of "how does our innovation transform food systems to help end hunger" and gives specific information on: - Target population/location - Type of innovation/technology - Expected impact and outcome Provide chart paper, markers, and sticky notes if possible. Spread groups out to work in different locations in the classroom. Students can reference <u>this information on Food Systems</u>.
15-30 minutes	Provide time for each group to present their concepts and sketches/simple prototypes. For consideration: Are there local or international groups or partners that may be able to provide feedback on ideas or offer guidance on moving from concept to working prototypes? Might the class be interested in interviewing (either synchronously with a video call or asynchronously with email outreach) an individual who "outplays hunger" with their innovation/technology? What steps would you need to take to make that happen?

5 minutes	Explore Download [the EarthProject app](#) (free on iOS and Android). Consider how an innovation like a mobile app can help capture, track, and report on individual actions. How might you use the app or create a group in the app to show collective impact?
5 minutes	Connections Wrap up the experience by drawing lines of connection from the Food Security Innovations activity to the Games for Change Student Challenge. How might a game inform and inspire action in others?

Extension Resources

- [Coding for Climate](#) global collaboration project (March-April project)
- Play the [FreeRice](#) game

About Take Action Global

Take Action Global is committed to providing accessible and impactful climate action education for educators and students worldwide. We believe that fostering climate action education for all is essential in addressing the climate crisis. Our engaging educational programs are designed to be adaptable to diverse learning environments and age groups. We empower educators with the tools and resources to integrate climate action into their existing curriculum, regardless of location or resources. By fostering global collaboration, we create a network of young people who are passionate about climate action and empowered to create a positive impact on a global scale. Learn more at www.takeactionglobal.org.