

# “Trashing Food Waste with Technology”

## Live Stream Post-Activity



[www.aitc-canada.ca](http://www.aitc-canada.ca)

## Lesson Summary

This lesson expands on learning from the Live Stream Pre-Activity and “Trashing Food Waste with Technology” Live Stream Event. Students will continue their learning by further exploring the concepts of food waste and food security, both locally and globally.

## “Minds On” (Diagnostic or Hook)

- Students should have had the opportunity to watch and participate in the Live Stream Event: “Trashing Food Waste with Technology”. If your class was unable to watch the event live, you can watch the recording at a later time here: [www.fmc-gac.com/AITC](http://www.fmc-gac.com/AITC)
- Ask the students to write down any questions they still have about agriculture, biotechnology or Arctic Apples that they have thought of or that weren’t answered during the live stream. You can submit students’ questions to: [projects@agscape.ca](mailto:projects@agscape.ca)

### 1. Food Waste & Food Security

- Review the concept of food waste with students and remind them of what they heard in the video.
- As a class try to come up with a definition for food security (The Food and Agriculture Organization of the United Nations says that “food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutrition food which meets their dietary needs and food preferences for an active and healthy life.”)
- Brainstorm as a class ways that food waste might affect food security. Record students’ answers on the board.
- Show commodity map of what is grown across Canada and remind students of your discussion in the Pre-Activity about what each region grows and why. How does the geographic region contribute to what grows where? Do you think Canadian’s diets differ based on what is grown around us – is the Ontario diet different from a diet of someone in BC or Newfoundland? What types of things do we do to ensure we have food available to us all year round?
- Ask: Do Canadian’s experience food insecurity?
  - Show the students the info stats of Canadian households experiencing food insecurity (1.7 million Canadian households experience food insecurity).

### Materials

## 2. A Global Introduction to Food Security

### Global Perspective:

- Explore the images from the photo documentary called “What the World Eats” by Peter Menzel and Faith D’Aluision (<http://time.com/8515/hungry-planet-what-the-world-eats/>). Ask students to comment on the following:
  - What do they notice about the amount of food eaten around the world? How do countries like the United States and Mali compare (note amounts of food and the number of people in the family).
  - Have students comment on the types of foods that are being eaten. Are the foods processed? Is their diet protein based? How does the geography impact what they are eating (fish diets in coastal regions, citrus diets in warmer regions).
  - Look at the captions and comment on the amount of money each family spends on their food. How does it compare to other countries.
  - How does culture impact food choices? How does geography impact culture?
- Next, explore the National Geographic website, “A Five Step Plan to Feeding the World” (<http://www.nationalgeographic.com/foodfeatures/feeding-9-billion/>) and look at the heading “Faces of Farming”, and as a class examine the 16 pictures and captions of the farmers throughout the world. Make connections between the photos seen here and the ones from *What the World Eats*.
  - What similarities exist between the farmers and families from similar regions? How are the families diets connected to what the famers are growing?
  - Again, how does geography impact what the farmers from around the world are growing?
  - Do the pictures allude to what technologies are being used? What technologies do you think are being used on each farm? Why?

Discuss factors and implications surrounding food insecurity including how the cost of food is increasing and lack of food leads to political unrest. Also talk about how by 2050 the world’s population will be 9 billion. The big question is - how we combat food insecurity?

### Materials

- What the World Eats by Peter Menzel:  
<http://time.com/8515/hungry-planet-what-the-world-eats/>
- “A Five Step Plan to Feeding the World”  
<http://www.nationalgeographic.com/foodfeatures/feeding-9-billion/>

### 3. Explore New Technologies!

- Inform students that technology can help the agriculture sector be more efficient and provide a variety of food items to sustain a healthy and balanced diet. In “Trashing Food Waste with Technology”, students learned about one of the many technologies used in agriculture – biotechnology (broadly speaking).
- Have students do some research to find other technologies being used in the agriculture and food sector (Hint: robotic milking, GIS software, wind turbines, etc).
- Students will choose a technology to research and then present their findings to the class (Note: the teacher can determine the guidelines).
- Direct students to FarmFood360 to help them get started and find some technologies:

Example: Tour either the Chicken Farm or Fruit Farm (class can vote which one) and discuss some of the technologies seen on the farm. For the chicken farm look at the control room and discuss the computerization and environmental technology used. Then look at the barn and talk about technology there. For the fruit farm, take a look at water and irrigation, cherry harvesting and processing.

#### Critical Thinking Questions:

- What are some reasons these farms have implemented the technologies you see on their farm?
- Are there other technologies that could be implemented that are not already?

#### Materials

<http://www.farmfood360.ca>  
Computer and Projector/Smart Board

This Lesson Plan was Written by:

AgScape

[www.agscape.ca](http://www.agscape.ca)

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