



Total time

45-60 mins

Age range

9-14 years

Food Waste Investigations in Numeracy



Subject

Geography, Social Studies, Global Citizenship, Mathematics

Learning Outcome

- Understand the framework of the Global Goals for Sustainable Development
- Stimulate in-depth discussion on food waste among students
- Improved understanding of concepts, deepening skills and competencies through cross-curricular studies
- Inspire students to be mindful in eating practices and eliminating the wasting of food through investigations, to help meet the Global Goals for Sustainable Development

Materials

- Devices for projecting video and displaying article
- Article: <http://www.fao.org/save-food/resources/keyfindings/en/>
- Video: <https://www.youtube.com/watch?v=B1-pKWot2yM>
- Investigations in Math worksheet (Appendix B)
- Every Plate Tells a Story activity sheets

Lesson Preparation

- Print Appendix B Food Waste Investigation Worksheet
- Ideally pick a date for students to analyse their school cafeteria

Note: This lesson is preferably part of an extension to the “Every Plate Tells A Story” lesson plan, which includes the Plate Survey and the animation film.

Teacher Notes

For this lesson, students will act as investigators observing the amount of food wasted in the school lunchroom. Students will calculate percentage of food wasted and will present data graphically.

Key Vocabulary

- Sustainability
- Development
- Goal
- Climate
- Consumption
- Quantitative
- Qualitative
- Data
- Evidence
- Impact

Step 1: Introduction to Food Waste

15
mins

Review “Every Plate Tells A Story” Survey

Introduce the lesson by asking students to take a “Gallery Walk” looking at the displayed Every Plate Tells a Story activity sheets from the previous lesson. Ask students to each identify their own plate and consider how much food on the plate was likely thrown away.

Data on Food Waste

Review the facts and data on food loss and waste reduction according to the Food and Agriculture Organization of the United Nations (FAO):

<http://www.fao.org/save-food/resources/keyfindings/en/> and

<http://www.fao.org/resources/infographics/infographics-details/en/c/317265/>

Discuss some of the statistics and examine the graph depicting the per capita loss and waste of food in regions of the world.

Note: Make sure that students know the difference between Food Loss and Food Waste. Highlight that this lesson will focus on Food Waste.

Video

Next, watch video Food Waste Explained: <https://www.youtube.com/watch?v=B1-pKW0t2yM>

Discuss why Global Citizen created this parody video to help stop the wasting of food in our world.

5 mins

Step 2: Learning Activity

Collecting and Visualizing Data

For the investigation, students will be gathering data through observations during the lunch period. Students will compare amount of food consumed to the amount of food wasted. As investigators, students should be reminded to

- Diagram,
- detail,
- and accurately depict

their observations in their notebooks. This information will serve as **quantitative data**. Students can also add qualitative data through use of interviews with cooks, lunch room staff, and students.

Data Evaluation

Following the collection of data, students should be guided to complete calculations and determine the percentage of waste and the amount of waste, then present data in tables and graphs. Evidence to support results should be provided (Appendix B).

Data Calls for Action

Based on results, students can together consider possible school and home initiatives to reduce food loss and waste. Follow-up assessments can be applied over time and results can be compared to measure impact.

Ask students to consider how their food selections could have been acquired from local farms or neighbourhood garden cooperatives. Would this be possible where they live?

5 mins

Sharing Activity

Encourage students to share their collected data on social media. Link this data to their ideas for reducing food waste.

Share your learnings and ideas on social media and let your students formulate a pledge using the following Hashtags:

#WorldsLargestLesson
#TeachSDGs

Tag the World's Largest Lesson

 @TheWorldsLargestLesson
 @TheWorldsLesson
 @theworldslesson

FLIPGRID.

- Invite students to share their thoughts and ideas <https://flipgrid.com/globalvoice>
- Add your activity and writing to a global map of learning about the Global Goals: <http://worldslargestlesson.globalgoals.org/map>

Supporting Resources

This Is a Really Compelling Reason to Cut Down on Food Waste (Global Citizen)

<https://www.globalcitizen.org/en/content/reducing-food-waste-saves-money/>

32 Tips for Reducing Food Waste Every Day (Global Citizen) <https://www.globalcitizen.org/en/content/tips-for-reducing-food-waste/>

About the authors

This lesson has been produced as a collaboration between the World's Largest Lesson and the [#TeachSDGs](#) Task Force.

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THE GLOBAL GOALS

For Sustainable Development



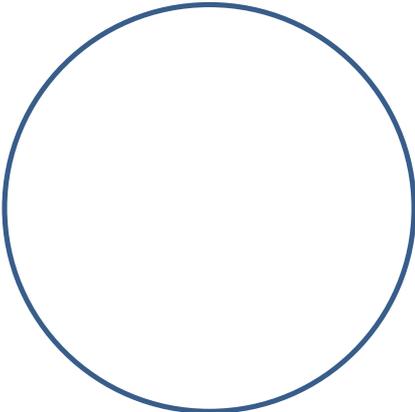
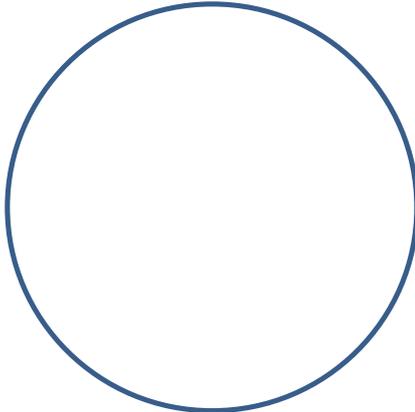
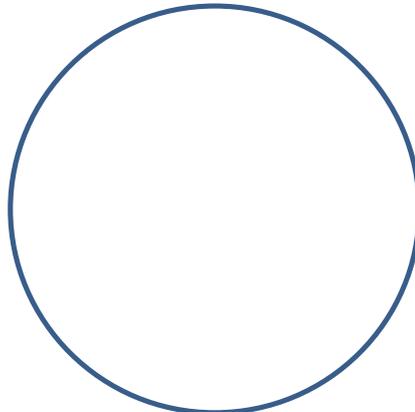
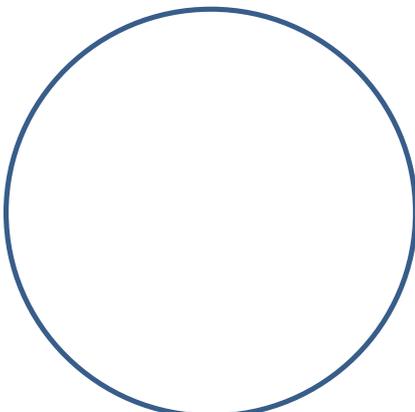
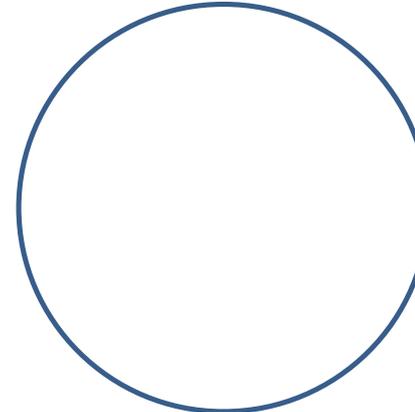
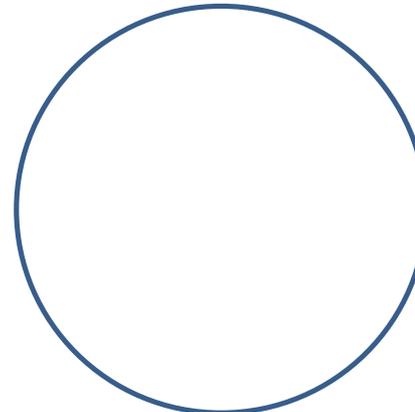
Appendix B: Food Waste Investigation Worksheet

Name: _____

Class: _____

Directions: During a school lunch period, you will be examining the amount of food consumed compared to the amount of food wasted.

1. Select a **representative group** (up to 3 student lunches for each person to observe).
2. Draw images or take photographs of plates of food before they are eaten and after.
3. Use **labels** to describe food and amounts.
4. Calculate totals based on approximate percentages.

<u>Before</u>	<u>After</u>	<u>Totals</u>
		Lunch #1 % Consumed: _____ % Wasted: _____
		Lunch #2 % Consumed: _____ % Wasted: _____
		Lunch #3 % Consumed: _____ % Wasted: _____
		TOTAL % Consumed: _____ % Wasted: _____