



NGSS – FOOD WASTE – ALL GRADES

Lesson Name	Grade Level
Food Waste	K

NGSS Standard (performance expectation)	Related Lesson Activities
<p><u>K-2-ETS1-1: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.</u></p>	<ul style="list-style-type: none"> - Discussion of food wasted in our daily lives, and how we can reduce that waste by planning ahead the food we buy, saving food as leftovers, and using tupperware. - Introduction to the food process and where and how waste is generated along that path. Inquiry into solutions at various steps (including shorter transportation of goods, better refrigeration, etc)
<p><u>K-LS1-1: Use observations to describe patterns of what plants and animals (including humans) need to survive.</u></p>	<ul style="list-style-type: none"> - All people (and animals) need food to survive, but as Americans, we waste 30-40% of it. Banana diagram
<p><u>K-ESS3-3: Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.</u></p>	<ul style="list-style-type: none"> - Solutions to wasting less food are discussed throughout the food process - Life of a Strawberry video - Wasting food wastes everything involved in making the food - water, labor, money, fuel, love - Source solutions from students for how they can individually waste less food (only choose food they will eat, save leftovers, freeze fruits and vegetables, etc

Lesson Name**Grade Level**

Food Waste	1st
------------	-----

NGSS Standard (performance expectation)**Related Lesson Activities**

<p><u>K-2-ETS1-1: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.</u></p>	<ul style="list-style-type: none"> - Discussion of food wasted in our daily lives, and how we can reduce that waste by planning ahead the food we buy, saving food as leftovers, and using tupperware - Introduction to the food process and where and how waste is generated along that path. Inquiry into solutions at various steps (including shorter transportation of goods, better refrigeration, etc)
---	---

Lesson Name**Grade Level**

Food Waste	2nd
------------	-----

NGSS Standard (performance expectation)**Related Lesson Activities**

<p><u>K-2-ETS1-1: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.</u></p>	<ul style="list-style-type: none"> - Discussion of food wasted in our daily lives, and how we can reduce that waste by planning ahead the food we buy, saving food as leftovers, and using tupperware. - Introduction to the food process and where and how waste is generated along that path. Inquiry into solutions at various steps (including shorter transportation of goods, better refrigeration, etc)
---	--

Lesson Name**Grade Level**

Food Waste	3rd
------------	-----

NGSS Standard (performance expectation)**Related Lesson Activities**

<p><u>3-5-ETS1-2: Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</u></p>	<ul style="list-style-type: none"> - Problem: our landfills are filling up too quickly, in part due to food waste. We're wasting 30-40% of the food we grow, and it has an impact on the environment and the food process along the way - Solutions: students discuss various ways food can be saved along the food process, as well as in their own homes - Comparison of pros and cons of different strategies such as purchasing food from local growers vs buying smaller portions.
--	--

Lesson Name**Grade Level**

Food Waste	4th
------------	-----

NGSS Standard (performance expectation)**Related Lesson Activities**

<p><u>3-5-ETS1-2: Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</u></p>	<ul style="list-style-type: none"> - Problem: our landfills are filling up too quickly, in part due to food waste. We're wasting 30-40% of the food we grow, and it has an impact on the environment and the food process along the way - Solutions: students discuss various ways food can be saved along the food process, as well as in their own homes - Comparison of pros and cons of different strategies such as purchasing food from local growers vs buying smaller portions.
--	--

Lesson Name**Grade Level**

Food Waste	5th
------------	-----

NGSS Standard (performance expectation)**Related Lesson Activities**

<p><u>3-5-ETS1-2: Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</u></p>	<ul style="list-style-type: none">- Problem: our landfills are filling up too quickly, in part due to food waste. We're wasting 30-40% of the food we grow, and it has an impact on the environment and the food process along the way- Solutions: students discuss various ways food can be saved along the food process, as well as in their own homes- Comparison of pros and cons of different strategies such as purchasing food from local growers vs buying smaller portions.
<p><u>5-ESS3-1: Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.</u></p>	<ul style="list-style-type: none">- Discussion of food wasted in the U.S. leads to ways in which we can create less food waste and therefore protect our resources. Student solutions with scientific topics may include improved refrigeration, growing fruits and vegetables in season, and following realistic expiration dates based on the fruit/vegetable and not the sticker.

Lesson Name**Grade Level**

Food Waste	6th
------------	-----

NGSS Standard (performance expectation)**Related Lesson Activities**

<p><u>MS-ESS3-3: Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment</u></p>	<ul style="list-style-type: none">- Identifying the problem of food waste and impacts on the environment- Discussion of food waste in the home is a precursor to daily monitoring of each student's daily food waste- Discussion of how composting is a solution to reducing food waste, ensuring food waste in the landfill doesn't add to the methane gas in the atmosphere, and minimizes human impact on environment (Climate Change)
<p><u>MS-ETS1-3: Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.</u></p>	<ul style="list-style-type: none">- Discussion of banana diagram – 30-40% of food is wasted each year in the U.S. (and additionally the corks activity for in person only). Design solutions include steps along each part of the food process in which we can waste less food. Solutions are compared and compiled into a list of what we can do to help (Wrap-Up Activity)- End of lesson challenge urges students to practice the skills they've talked about, and discuss the best parts of each solution during the next lesson