



Science, Engineering,  
Technology & Math

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*Farm to Table*

# What is Food to Table?



## Make a food journal

Through 13 paper plates, punch a hole and tie plates together loosely with a piece of yarn.

On the first plate, draw what you ate yesterday.

Do you know where that food came from?

Save food journals and start each class with a new entry.

# Where does your food come from?

Most people get their favorite foods already boxed or bagged from a grocery store.

How does macaroni and cheese become macaroni and cheese?

What part of the chicken is a nugget?

How does a potato get chipped?



Food, food, food. Who likes to eat food?

# What are your favorite foods?



Food, food, food. I like to eat food!

Where do you think food comes from?

How long does it take for food to get from the farm  
to your table?

Without food what happens to families?

How important are farmers to our daily lives?

Where does your food come from?

What is a farm?

My favorite food is not spaghetti.

# KWL

Know:

What do you know about where food comes from?

Want to learn:

What do you want to learn about where food comes from?

Learned:

What have I learned about where food comes from?

Tuna salad is not my favorite food.

## Do You Know?

How many people can one farmer feed in one year?



Ham is not my favorite food.

# Popcorn

Who has eaten popcorn before?

How fast can a person grow in one year?

How fast can a corn stalk grow in one year?

Native Americans told tales of spirits living inside each kernel of popcorn. The spirits would get angry if their houses were heated and as the houses got hotter, the spirits would get angry and would show it by shaking their house. When the heat became too much, the spirits would burst out of their home in a puff of steam.

What really makes popcorn pop?

What makes popcorn pop?



# Swedish Chef Popcorn



# Plant Life Cycle

What do plants have to do with the food we eat?

How many of you eat beans?

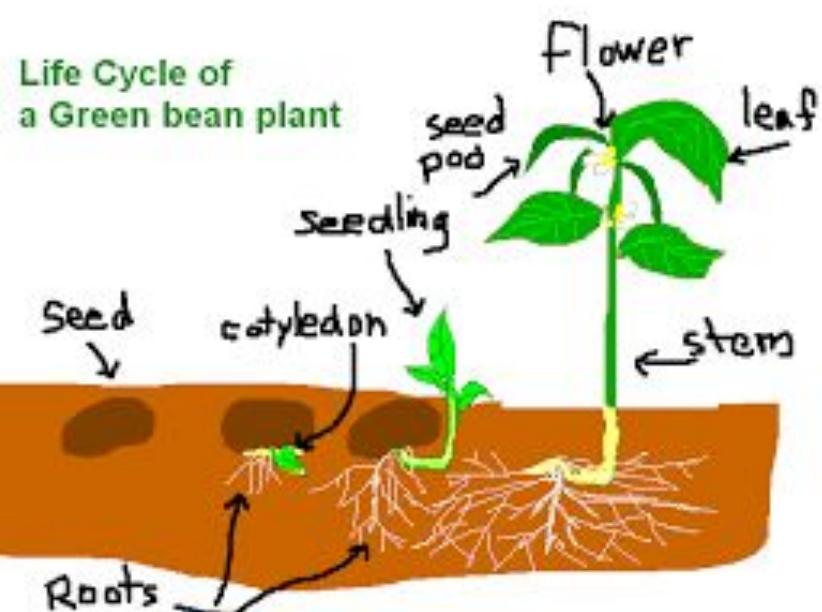
What foods are made from beans?

How do we get beans?

Beans are grown all over the world. They are quick and easy to grow and healthy to eat.

How does a plant begin?

How does a seed turn into a plant?



# Time Lapse Beans



# Sorting By Attributes

What makes us different?

Look around and think of ways the people in class can be sorted.

Hair color

Clothing

Types of shoes

Eye color

What does the word “attribute” mean?

Sort beans to use in a farmscape mosaic.



# Sorting Shapes



# Farm Animals

What kinds of farms do we need for food?

What makes raising animals on a farm different from crops?

Who has a pet?

Do you help take care of it?

What kinds of things do pets need that they can't do for themselves?

How is taking care of a pet like raising farm animals? How is it different?



# Farm Animals



# A Real Family Farm



# Farm Animal Facts

- If a pig were able to fly, other pigs would be unable to see him. Pigs are incapable of looking up.
- The average horse eats seven times its own weight in food each year.
- Pigs have been rated as the fourth most intelligent animal in the world and are believed to be as smart, if not smarter than dogs.
- Because of the way a cow's legs bend, they are incapable of walking downstairs. However, they can walk upstairs.
- A donkey's eyes are placed so that it is able to see all four of its feet no matter which way it looks.
- Chickens are not very good at flying. The longest recorded flight of a chicken is only thirteen seconds.
- More people are killed annually by donkeys, on average, than die in plane crashes.
- Cows are color blind. A bull charges a matador's cape because it is moving, not because it is red.
- Cows produce about 30% of the methane in the atmosphere.
- Dairy cows produce more milk when they are listening to music.

# The Little Red Hen

Who are the characters in the story?

Where is the setting?

Does the setting change?

What are the important events in this story?

How does the story end?

What do the characters learn from what happened in the story?



# The Little Red Hen



# Farm Machines

## Did You Know?

In 1930, it took the work of 1 farmer to feed 10 people.  
Today, 1 farmer feeds 130 people.

In 1930, it took 15-20 hours of labor to produce 100 bushels of corn.

Today, it only takes 2.75 hours of labor to produce 100 bushels of corn.

How do farm machines help bring food to our table?



MachinesForKids.com



# Combine Machine Harvesting Corn



# Hay Baling



# Pesky Pests and Problem Solving

Just For Fun

Create a bug/insect that will either help or harm a farmer during his/her growing season.

What is the name of your pest?

What kind of food does it help or harm?

How?



# Good Bugs vs Bad Bugs



# Garden Pests



# If Pizza Could Talk

Pizza Facts from Neil Degrasse Tyson

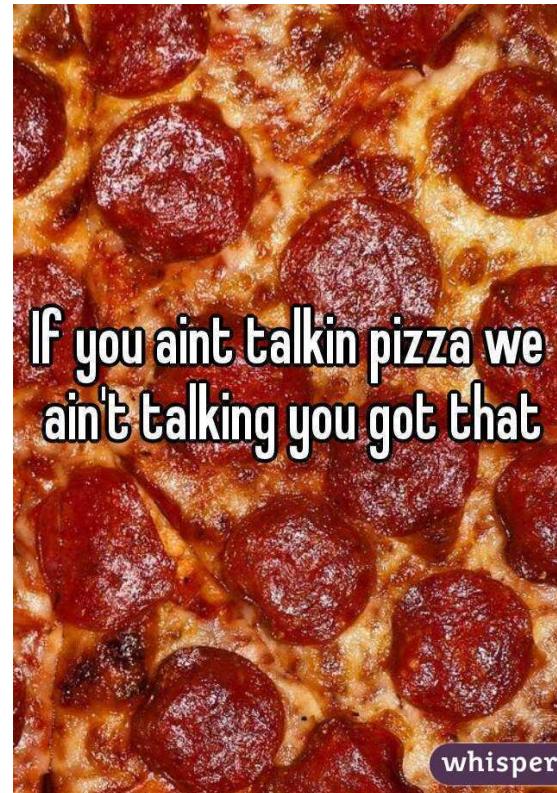
On Venus you could cook a 16 inch pepperoni pizza in seven seconds just by holding it out to the air.

A 14 inch pizza is 154 square inches of food. Nearly twice as large as the 78 square inches of a 10 inch pie.

If the cheese on a 14 inch pizza falls just 1 inch shy of the crust, the pie is missing 30% of the cheese that could be there.

If the crust of a 14 inch pizza is 1 inch wide, then the next 1 inch band occupies 30% of the topping's area.

[www.theinterrobang.com/neil-degrasse-tynsons-pizza-science/](http://www.theinterrobang.com/neil-degrasse-tynsons-pizza-science/)



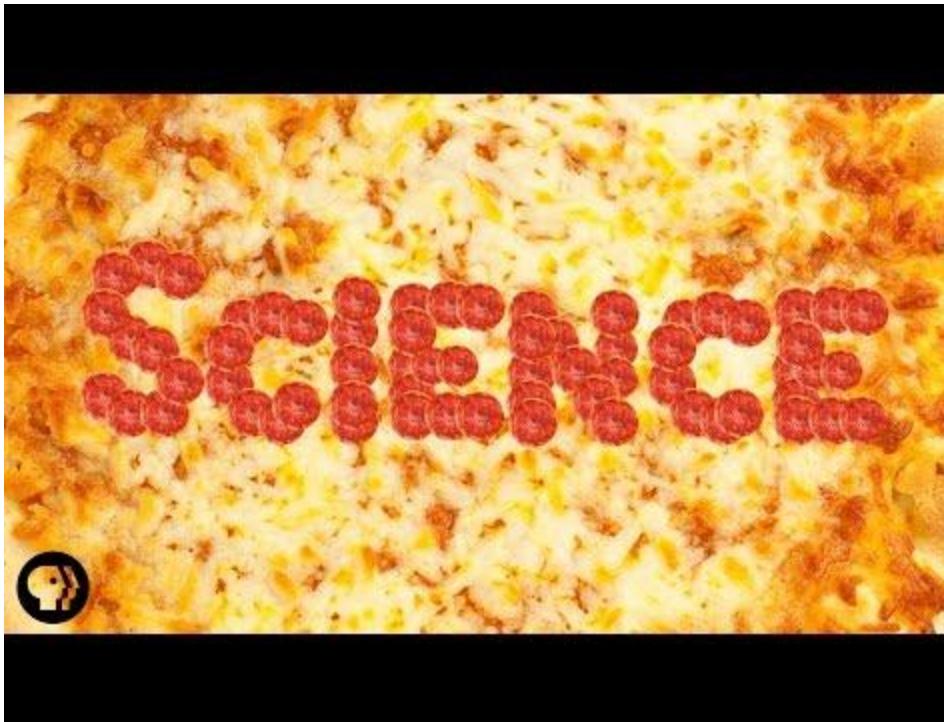
If you aint talkin pizza we  
ain't talking you got that

whisper

# Pizza Chemistry



# Pizza Science



# Sustainable Farming

## FACTORY VS SUSTAINABLE FARMING

### ENVIRONMENT

#### FACTORY FARMS

#### SUSTAINABLE FARMS

\$34.7 BILLION

OF ENVIRONMENTAL DAMAGE IS CAUSED EACH YEAR IN THE U.S.

RECOGNIZE THE IMPORTANCE OF PROTECTING THE NATURAL ENVIRONMENT

FARMERS MANAGE THEIR FARMS RESPONSIBLY, BY MAINTAINING THE FERTILITY OF THE LAND & PRESERVING RESOURCES FOR FUTURE GENERATIONS

40%

OF ALL CHEMICAL FERTILIZERS USED ARE RELEASED INTO THE ENVIRONMENT AS AMMONIA

# Sustainable Farming



# Green Living



# To Market, To Market

How does the distance that a food is transported affect our environment?

What fresh fruits and vegetables are always seen in the grocery store?

Can you name any foods that are grown nearby?

Have you eaten bananas, coconuts, or pineapple? Do we have banana trees, coconut trees, or pineapple fields in the area? Why or why not?

Do you think all the foods at the local store are grown nearby?



# Portland Farmers Market Tour



CHEF TIPS

# Helping Ourselves, Helping Our Planet

How does the distance that a food is transported affect our environment?

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Do you think all the foods at the local store are grown nearby?

## WHY EAT THE UGLY APPLE?

An apple from the



An apple from the



Thanks to WAX and PRESERVATIVES,  
this apple might *appear* to be  
shinier, shaped nicer, or cheaper but...

An apple from the Farmer's Market  
is BETTER FOR YOU!  
(And better for everyone else, too!)

### Face The Facts:

Most food travels 4-7 days before reaching stores.  
On average, food travels 1,300-1,500 miles before reaching our grocery store shelves.  
Almost every state in the US buys 90% of its food from other states.

EAT LOCAL & ENJOY!

To Find the Farmer's Market Nearest YOU, Go To: [www.cenyc.org](http://www.cenyc.org)

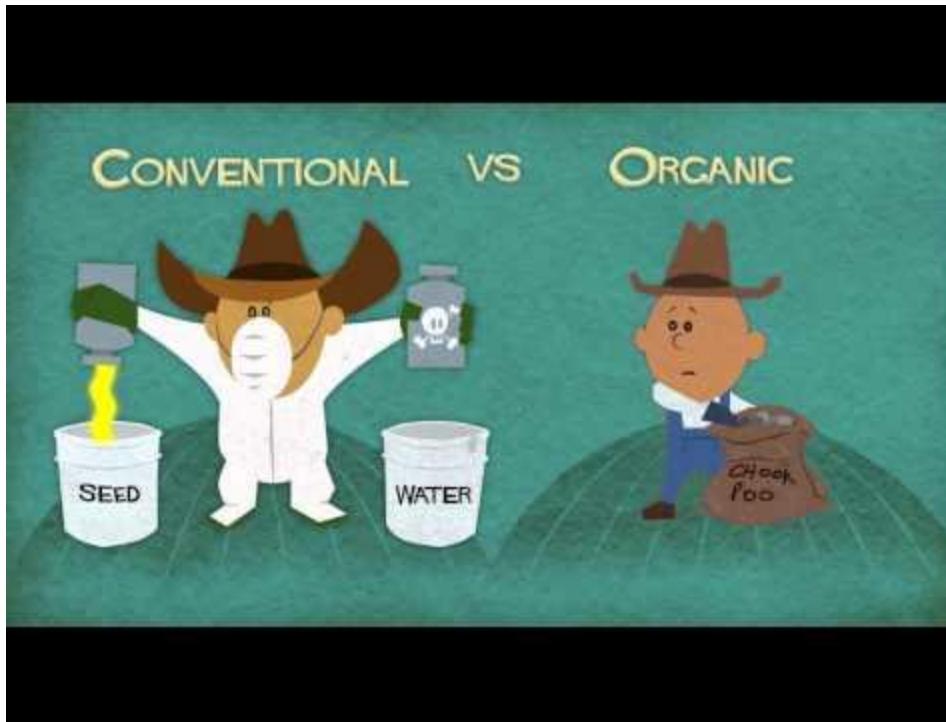
# Pesticides vs Organic Pesticide Science



# Polyface Farm



# Organic Farming



# Harvest Celebrations

How do people celebrate a special event?

What events are celebrated in the United States?

Are there traditional foods associated with these celebrations?

Describe what people do during the celebration.

Why would a community celebrate a food harvest?

How would a community preserve food for the winter?



# Harvest Festivals



# World Harvest Festivals

## Onam-Kerala, India



# World Harvest Festivals

## -Chiapas, Mexico



# World Harvest Festivals

## Ayiza-Togo, Africa



# World Harvest Festivals

## Mid Autumn Festivals-Asia



# Tuna Salad on Crackers

There's a Chef in My Soup by Emeril Lagasse

## Ingredients:

- 2 6oz cans tuna, drained
- 2 Tablespoons mayonnaise
- 2 Tablespoons ranch dressing
- 2 Tablespoons chopped celery
- 2 Tablespoons onion
- 1 teaspoon italian seasoning

Combine all ingredients and serve on crackers.

# Pita Pizzas

There's a Chef in My Soup by Emeril Lagasse

Ingredients:

1 jar pizza sauce

1 ½ cups grated mozzarella cheese

Pita rounds

Toppings, mushrooms, olives, pepperoni, chopped green pepper, chopped onion, etc.,.

Spread sauce on pita. Add cheese and toppings. Heat until melted in oven, toaster oven, or microwave.

# Pesto Cheese Dip

There's a Chef in My Soup by Emeril Lagasse

## Ingredients:

- 2 Tablespoons walnut pieces
- 1 cup fresh basil leaves
- 1 teaspoon minced garlic
- $\frac{1}{4}$  cup parmesan cheese
- $\frac{1}{2}$  cup olive oil
- 8 oz cream cheese, softened
- Crackers, bagel chips, or tortilla chips

Combine walnuts, basil, garlic, parmesan cheese, and olive oil in a food processor and blend until smooth. Place cream cheese in the center of a plate, spoon pesto over the top, dress with crackers around the cheese. Enjoy!

# Favorite French Toast

There's a Chef in My Soup by Emeril Lagasse

## Ingredients:

- 4 large eggs
- 1 cup milk
- $\frac{1}{4}$  cup orange juice
- 1 Tablespoon orange zest
- 2 teaspoons sugar
- $\frac{1}{2}$  teaspoon vanilla
- $\frac{1}{8}$  teaspoon salt
- 8 slices bread
- 8 Tablespoons butter
- Maple syrup

Combine eggs, milk, orange juice, orange zest, vanilla, and salt in a bowl and whisk. Melt 1 teaspoon of the butter in a hot skillet. Dip bread in egg mixture to coat and fry in pan until browned on both sides. Continue with all slices of bread. Serve with maple syrup.

# Resources

## Local Resources

Wasatch Community Gardens

Real Food Rising

Utah Food Bank

<http://specertified.com/blog/view/why-does-pizza-taste-so-good-the-science-of-the-5-basic-tastes-and-pizzas-c>

<http://sciencenetlinks.com/science-news/science-updates/pizza-cheese/>

<http://science.howstuffworks.com/innovation/edible-innovations/pizza2.htm>

<http://www.sustainabletable.org/246/sustainable-agriculture-the-basics>

<http://asi.ucdavis.edu/programs/sarep/about/what-is-sustainable-agriculture>

# Vocabulary

Life cycle- Biology. The continuous sequence of changes undergone by an organism from one primary form, as a gamete, to the development of the same form again.

Sort- To place or separate according to kind or type.

Attribute- A quality that is thought of as belonging to a person or thing; characteristic.

Transportation- The movement of objects from one place to another. Modes of transport include air, rail, road, water, cable, pipeline, and space.

Diagram- Two dimensional geometric symbolic representation of information according to some visualization technique.

Marketing- The process of promoting, selling, and distributing a product or service.

Food mile- The distance food is transported from the time of its production until it reaches the consumer.

# Field Trip Ideas

*Wheeler Farm*

*Community Gardens*

*Produce Stand/Market*

*Whole Foods*

*Harmon's*

# Pro Tips

This digital teaching tool is a supplement to the curriculum, Farm To Table Enrichment Camp, PCS Edventures!

Supplies, weekly class descriptions, games, images, and all supplemental materials, etc. are contained in the curriculum booklet for teachers.