

FOOD for THOUGHT

A MAGAZINE ABOUT FOOD SYSTEMS BY KIDS, FOR KIDS

Food Systems 101
How food gets to your plate!

Food Justice:
Are our food systems fair?

Plants & Bugs
Where all food begins.

What
food choices
do you make?

WASTED FOOD:
Where does it go?

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The Writing Process

For more information about our projects visit:
<http://www.hightechhigh.org/schools/HTECV/>

Letter from the Editor

Dear Reader,

This trimester we learned how to read non-fiction texts, how to write paragraphs and how to do research. Each student researched one of their fierce wonderings about food systems.

I watched as they became experts about their topic and supported one another through the researching and writing process.

Their passion and commitment to this project is the only reason that we could make this magazine.

Please join me in celebrating the hard work and perseverance of our amazing students. I am so proud of each and everyone of them. I also want to thank all of the families who supported this project - it would not have been possible without you!

Sincerely,
 Amanda Borow
aborow@hightechhigh.org



1	<p>Brainstorm Questions <i>As a class we filled a wall with our questions about food systems!</i></p>
2	<p>Develop Questions <i>Each student chose two research questions. We brainstormed keywords to help us research.</i></p>
3	<p>Do Research! <i>We learned how to do research We researched our topics and took notes on important information</i></p>
4	<p>Organize Research <i>We cut out and organized all of our details into paragraph organizers. One of the most challenging steps!</i></p>
5	<p>Write 1st Draft <i>We typed up the first draft of our articles!</i></p>
6	<p>Self-Critique & 2nd Draft <i>We edited our own writing. Then we made changes to our 1st draft.</i></p>
7	<p>Peer Critique & 3rd Draft <i>We edited a peer's writing. Our feedback was kind, specific and helpful.</i></p>
8	<p>Teacher Check-In & Publishing <i>A few more rounds of edits and our articles were ready to publish!</i></p>

FOOD SYSTEMS 101

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“Where does food come from?”

To grapple with this question we needed to learn about food systems. *A food system is the process, or all of the steps, that food goes through before it gets to your plate.* Our exploration of food systems included learning about industrial food systems and sustainable food systems.

To explore sustainable food systems we visited Wild Willow Farm. We harvested food, cooked food, helped with farm chores, completed a sustainability scavenger hunt and learned about composting!



*What did you learn at Wild Willow Farm?
What did you enjoy at Wild Willow Farm?*



“I learned that they use cow poop and goat poop as fertilizer” - Maya

“I enjoyed eating the kale!”
- Nicolas



“I enjoyed meeting and feeding the chickens.” -April



“I learned that they recycle their water.”
-Ximena



“I learned that strawberries only grow in certain months”
- Louie



“I enjoyed pulling out the bad plants”
- Andrea

“I learned that strawberries do not grow in the winter”
-Xander



ALL ABOUT SUSTAINABLE FOOD SYSTEMS

BY RICHARD JOSE

WHAT IS A SUSTAINABLE FOOD SYSTEM?

Did you know that 40% of today's population works in agriculture? Some of these people work in sustainable food systems. A **sustainable** food system or an (SFS) is a collaborative network of farmers, common grocery stores, farmers markets and transportation that gets the food from farm to your plate. Did you know there are four pillars of sustainable food systems? Well the first pillar of an SFS is nutritional well being. This means access to healthy organic food. A lot people in the US are **food insecure**. Food insecurity means that you cannot afford to buy the healthy food that you need. In 2013, 17.5 million households were food insecure. 49 million Americans struggle to put food on their plate. In the US hunger isn't caused by the lack of food but rather by poverty. The second pillar of an SFS is environmental well being which means protecting the environment. **Pesticides** are bad for our environment. Pesticides are chemicals that kill bugs that get on our crops. But those chemicals that are on crops stay there and then we eat those crops with the pesticides on it. The third pillar is sustainability. In a sustainable food system they don't use a lot of resources, they reduce the amount of resources they use such as oil, gasoline, coal, water and land. This means that they are reducing the greenhouse gas effect. But you will find out that if you read my next paragraph. The fourth pillar, and the last, is **Social Justice** this means animals and humans are treated fairly. Animals in industrial food systems are fed very badly. They are fed a massive dosage of antibiotics. In sustainable food systems animals are treated fairly they are fed well, they have space, and they are not fed any antibiotics. Farm workers, including children, work and live in poor conditions and are paid low wages. In industrial food systems. In sustainable food systems all humans are treated with respect. All four pillars are important to sustainable food systems.

-WORD WISE-

SUSTAINABLE

A sustainable food system will last a long time because it doesn't use up or waste resources

SOCIAL JUSTICE

When people and animals are treated fairly

FOOD INSECURE

Food insecurity means that you cannot afford to buy the healthy food that you need

PESTICIDES

Pesticides are the only toxic material used to kill living animals or insects

FOOD MILES

Food miles are the distance your food travels from farm to plate

NUTRITION

The process of eating the right kind of food so you can grow properly and healthy

For more information about Sustainable food system, check out these resource:

- "Sustainable Food Systems Global" 2/10/16, <http://sustainablefoodsystems.com/>
- "10 Things You Need To Know About The Global Food Systems," *The Guardian* 2/18/16, <http://www.theguardian.com/sustainable-business/food-blog/10-things-need-to-know-global-food-system>



One of the positives of a sustainable food system we get all organic crops.

WHAT ARE THE POSITIVES AND NEGATIVES OF A SUSTAINABLE FOOD SYSTEM?

Did you know that a sustainable food system or (SFS) lasts a long time because it does not use up or waste resources? This is one of the many positive things about a SFS. First of all, an SFS doesn't use chemicals. Instead of pesticides they use ladybugs. The ladybugs eat the insects that try to eat the crops they grow. Another positive thing is local farms in San Diego pick their crops by hand when they are ripe. When the crops are picked they're washed in water instead of chemicals, like chlorine, that can be used to make food last longer. They reuse their water and they don't freeze the crops. After the food is processed it is transported. Food in an SFS travels much shorter distances than food in an industrial food system. The average **food miles** for an industrial food system is 1,500 miles. The average for a SFS, on the other hand, is 50 to 100 miles. Food miles are the distance your food travels from the farm to your plate. Transporting with trucks, farms and planes gives off fossil fuels. Those fossil fuels are called greenhouse gasses. Greenhouse gasses contribute to global warming. Global warming makes our climate warmer and that makes the natural ice melt which makes the oceans rise. In an SFS food travels shorter distances so it does not produce as many greenhouse gasses. Since an SFS does all of these things it can be expensive when you buy your fruits and veggies at a farmers market. However, many people think that it is worth the cost because of the many benefits of sustainable food systems.

-FAST FACTS-

There are four pillars of a sustainable food system

1. **Nutritional well being**
Access to healthy nutritious foods

2. **Environmental well being**
We have to protect the environment

3. **Sustainability**
In a SFS they don't use a lot of resources

4. **Social justice**
*Animals are fed a massive dosage of antibiotics
Farm workers are living in poor conditions*

INDUSTRIAL FOOD SYSTEMS

BY MAYA QUINTERO TRUJILLO

WHAT IS AN INDUSTRIAL FOOD SYSTEM?

Did you know that all the food you eat travels through an food system? In an **Industrial Food System** [IFS] food travels a lot of miles to get to your plate. The first step is Growing and Harvesting the food. Farmers use **pesticides** on crops to make them grow faster and so no bugs eat the plants. They also use machines to harvest the crops. The second step is Processing. Sometimes food is washed in chemicals because the food needs to last a long time in order to get to the place where they sell the food. The third step is Distribution. Before the food gets to the stores it is held in a refrigerator. This **preserves**, makes the food last a long time, before it goes to the retailer and consumers. The fourth step is Transportation. Food in an IFS travels an average of miles 1,500. Sometimes food is frozen to keep it good. Unfortunately, if food spends a lot of time frozen, it loses some nutrients. Some research has shown a loss of 30 to 50 percent of **nutrients** over a 5 to 10 day period if food is frozen. The fifth step is Retailers such as grocery stores. Retailers are Where you buy your food. The IFS gives you the possibility to go to your nearest grocery store to buy your favorite food all year round. The sixth step is Consumer. The person who buys the food from the grocery store, cooks and eats the food. The seventh step is Disposal. Disposal is when food is thrown away. Sometimes trash is put in a hole called a **landfill**. Those are the many steps of an industrial food system.

-WORD WISE-

PESTICIDES

A chemical used to kill bugs that can make you sick.

INDUSTRIAL FOOD SYSTEM (IFS)

A food system that is big and uses a lot of resources.

SUSTAINABLE FOOD SYSTEM (SFS)

A healthy, smaller food system.

LANDFILL

A giant hole where our trash goes.

NUTRIENTS

Is the healthy part of most foods.

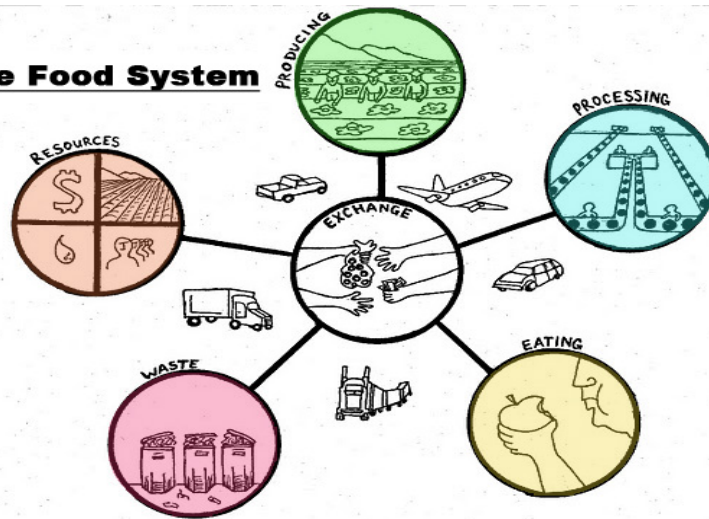
PRESERVES

Makes the food last a long time.

For more information about INDUSTRIAL FOOD SYSTEM , check out these resource:

- "Agriculture: The Basics of Our Industrial Food System in 5 minutes." Sustainable Guidance. February 10, 2016
- <https://www.youtube.com/watch?v=04T23houM4s>
- <http://www.kcet.org/social/departures/Industrial%20Food%20System.jpg>
- Animals Australia <http://greengarageblog.org/list-of-top-19-factory-farming-pros-and-cons>

The Food System



The many steps of an INDUSTRIAL FOOD SYSTEM.

WHAT ARE THE POSITIVES AND NEGATIVES OF AN INDUSTRIAL FOOD SYSTEM ?

You are probably wondering, is an Industrial Food System good or bad? One good thing is that an IFS makes food in large amounts. IFS uses more machines than people so food is less expensive and more people can afford it. The reason is because food has become cheaper to process and produce. Another positive is that you can buy a variety of all foods in all seasons. One bad thing about an IFS is that it uses pesticides for crops. Planes go around the field spraying pesticides. Pesticides are chemicals that farmers use to keep bugs off of plants. They can make you sick, farm workers have gotten sick because of the pesticides. Another reason why an IFS is bad is that it uses a lot of resources. It uses water and land. It can waste a lot of resources. Also, IFS uses a lot of gasoline to harvest and transport food. Transportation causes pollution like greenhouse gases and these gases can cause climate change. Climate change is when the world changes because of little effects. What do you think is an IFS good or bad?

-FAST FACTS-

- 1. PRODUCER**
where food is harvested.
- 2. PROCESSING**
where food is combined or mixed with other foods.
- 3. DISTRIBUTION**
where food is held in a refrigerator to keep the food cold.
- 4. TRANSPORTATION**
how food gets to the retailer.
- 5. RETAILER:**
where you buy the food.
- 6. CONSUMER**
the person who eats the food.
- 7. DISPOSAL:**
where food waste goes

FOOD MILES: GOOD OR BAD?

BY XIMENA DURAN HAMMERSTAD

HOW FAR DOES FOOD TRAVEL?

Have you ever heard the words food miles? If you want to learn about food miles keep on reading. Food travel means that all of the steps that food product goes through before it gets to your plate and after it is on your plate. But if you think that food just gets up and grows legs and walks to your house, no. I am just being silly about food walking. People pick, the food and put it in boxes, put the boxes on planes, trains ,boats or trucks so it goes to the store where you buy it. Food miles are the distance of your food travels from the farm to your plate. How far food travels depends on which food and the food system the food is in. In an industrial food system, food travels an average at 1,500 miles. In a sustainable food system the food travels as little as 50-100 miles! For example, blueberries in an industrial food system could come from Chile. That's in South America! My guess is that those blueberries travel over 1,000 miles! What's your guess? Chile is far away and it's grown there which means it's not local. In a sustainable food system blueberries are grown in San Diego and is it local. Local means that maybe 20-100 miles away from you. What's your guess? That's all you need to know about food travel.

-WORD WISE-

FOOD SYSTEM

All of the steps that food product goes through before it gets to your plate and after it is on your plate.

FOOD MILES

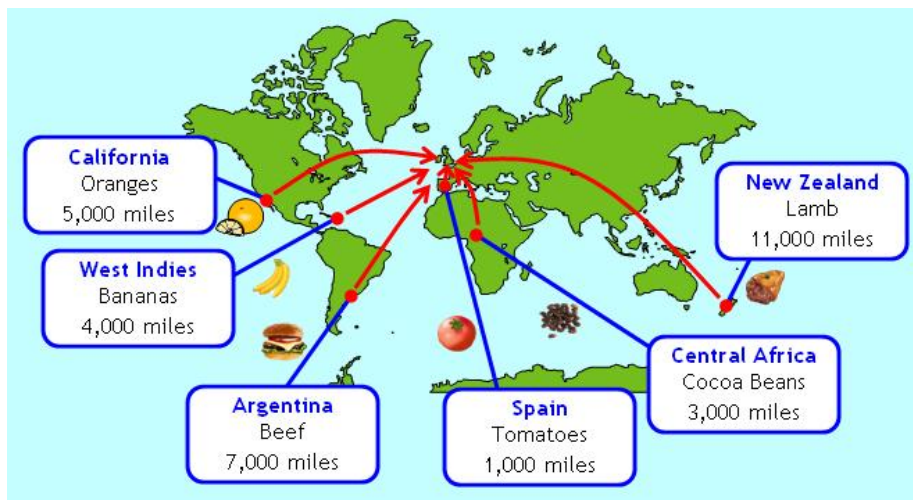
The distance of your food travels from the farm to your plate.

CLIMATE CHANGE

When our weather changes into extreme weather like: Big ice cubes are melting, oceans are rising, it's getting hotter.

For more information about Food miles, check out this resource:

- Pollan,Michael"Why do we eat local"youtube,Feb 19,2016
https://www.youtube.com/watch?v=DhaG_Zi6izUhttps://www.youtube.com/watch?v=DhaG_Zi6izU



In an industrial food system food travels an average at 1,500 miles.
 In a sustainable food system the food travels as little as 20-100 miles!

ARE FOOD MILES BAD OR GOOD?

You know about food miles already, but do you want to know if it's bad or good for our world, then keep on reading. Food travel is positive because we can have so many different types of foods all year long. But there are many things about food miles. Food miles can affect your health. In industrial food system, sometimes farm workers put chemicals, like chlorine, on blueberries. Chlorine is a chemical that people use in swimming pools. They do that because when the blueberries are traveling they can go bad and the chemicals help the blueberries from going bad. It can sound gross so, if you and your family like blueberries then buy them from a farmer's market because that's picked and washed with normal water sometimes. Do you sometimes see black air that's coming out of trucks, that's pollution and it's bad for our air. Another reason why food miles are bad is because transportation in industrial food systems uses gasoline and makes pollution like greenhouse gases. Pollution is getting in our air and it is getting people sick and is bad for the environment. Pollution is caused by transportation like trucks, cars, planes and ships. Greenhouse gases are bad because it causes climate change. Climate change is when our weather changes into extreme weather like: Big ice cubes are melting, oceans are rising, it's getting hotter. We can stop the pollution by stop using our cars and you can walk. Also, you can buy food from a sustainable food system. That's all you need to know about food travel and is it good or bad.

-FAST FACTS-

In an industrial food system the foods travel at least 1,500 miles.

In a sustainable food system the food travels as little as 50-100 miles.

In an industrial food system blueberries are washed in chlorine. That's water from a pool.

Transportation in industrial food systems uses gasoline and makes pollution like greenhouse gases causes climate change.

THE GOOD AND BAD THINGS ABOUT PESTICIDES

BY JOSHUA HUGHES

WHAT ARE PESTICIDES? ARE THEY GOOD OR BAD?

Have you ever wondered if **pesticides** are in the food you eat? Chances are you have eaten food with pesticides on it. Well if you don't know what a pesticide is, keep reading. A pesticide is a **chemical** that **farmers** use to kill bugs that are harmful to some plants. Pesticides are helpful to farmers. Farmers use pesticides because they plant all the food that you eat. Farmers sometimes use pesticides because they are cheaper and easier to use than natural pesticides. At a big farm, the farmers use a plane to spray pesticides on the plants. Pesticides can be helpful but there are some really bad things about them too. There are three reasons why pesticides are bad. One reason is because they kill all the bugs even the good ones like bees and lady bugs. The second reason is because they are chemicals and could make people sick especially farm workers. The farm workers are getting sick because they're getting sprayed with pesticides. The third reason is because pesticides are in the food you eat. If you eat an apple there can be 10 pesticides on it. These are the reasons why pesticides are sometimes good but mostly bad.

-WORD WISE-

PESTICIDES

A chemical to protect plants by killing bugs

DE

Diatomaceous Earth is a pesticide but natural

CHEMICAL

Something that people use

ORGANIC

Is food that was made without pesticides

FARMER

A guy or girl who picks the food that you eat

For more information about pesticides, check out these resource:

- "Pesticide" Fact Monster. 3-10-16.
<http://www.factmonster.com/encyclopedia/science/pesticide.html>
- "Help People Stay Safe." SynGeta. 3-9-16.
http://www.syngenta.com/global/corporate/en/goodgrowthplan/commitments/Pages/help-people-stay-safe.aspx?utm_source=google&utm_medium=cpc&utm_content=help-people&utm_campaign=good-growth-plan&gclid=CJbC7tKrtMsCFdKIfgodCTOD8Q



Always wear protective gear if you're spraying pesticides farmers!!!

WHAT CAN WE USE INSTEAD OF PESTICIDES?

If you don't want to buy pesticides for your garden you can get natural pesticides. A natural pesticide is something that you use instead of a **chemical** pesticide. And sometimes natural pesticides are even better than just the regular pesticides! Do you know what **Diatomaceous Earth (DE)** is? It's a white powder that you can use like a pesticide but you're supposed to bury under the dirt in your garden. It's better than a pesticide because you can't get sick from it. There are many other natural pesticides. If you want mice to stay out of your house you can use peppermint and they will avoid your garden. Codling moths are really annoying but you can use rose petals to keep the codling moths out of your life. Did you know that garlic is a natural pesticide? Did you know you can also use natural pesticides to keep mosquitos from biting you? People choose to use natural pesticides at their house in their garden because it's way safer because they are not made with chemicals and they won't get you sick. So, if you don't want to use chemical pesticides, try one of the natural pesticides instead.

-FAST FACTS-

1.
You can use a cinnamon stick to keep away ants from your garden
2.
You can use natural cleaning products to keep bugs away from your plants
3.
Pesticides are good but most pesticides are bad

WHAT ANIMALS DO IN THE FOOD SYSTEM

BY: STEPHANIA MAXIME MIKAIL

WHAT DO ANIMALS DO IN THE FOOD SYSTEM?

Animals have many jobs in the **food system**. Animals give us food and fresh milk that keeps us living. Chickens give us eggs and meat for our food system. Cows and goats provide us with nutritious milk and meat that we eat. And horses are used for pushing heavy stuff and getting ridden on. Not only do they provide us with food and fresh milk but animals also give us fiber, clothing, blankets, Animals also make manure to help our plants grow because we can recycle. Food and fiber are very important to our food system. Animals are really important to our food system, because without animals we would not have anything that we have right now.

-WORD WISE-

MANURE

Manure is animals poop, manure helps plants grow.

FIBER

What we use to make clothing.

FOOD SYSTEM

Our food system is the reason why we have food on our plate. It is all the steps food goes through to get to your plate.

For more information about how animals are treated, check out these resource:

- Roth, Ruby. [That's Why We Don't Eat Animals](#) North Atlantic Books Berkeley, California.
- <http://www.sustainabletable.org/274/animal-welfare>



FREE CHICKENS



CRAMMED CHICKENS

HOW ARE ANIMALS TREATED IN INDUSTRIAL FOOD SYSTEM?

Whenever you eat do you wonder where did your food comes from? How are farmers treated in the food system? How do animals help? Or most importantly, how are animals treated in industrial food system? Farm animals do not have space to live free like wild animals do. Birds in the industrial food system can not move their bodies in their cramped cages, they can't even spread their wings! Cows do not have space to sleep at night, they have to stand in a small cage for the whole night. The machines pull to hard on the cows milkers which make the cows very uncomfortable. Horses do not have any space either. Horses always have to move carriages and they can not run free. Animals should be treated good for what they do for our food system. They should be able to walk around have some fresh air not be in their cages all day. Now you know how animals are treated in the food system.

-FAST FACTS-

Cows get milked so hard from the machines that blood comes out of there milkers.

Farm chickens can't move freely or spread their wings all they do is sit down in a cramped cage laying eggs.

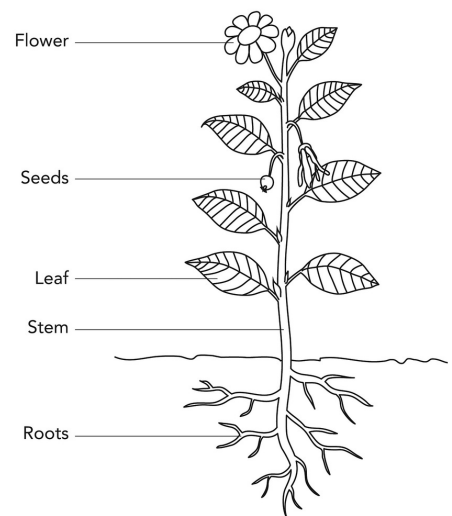
Farm animals get treated very unfairly and free animals get to live free.

PLANTS & BUGS

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How do plants grow?

To continue our exploration of the question, “*Where does food come from*” we learned about how plants grow into food. We learned about photosynthesis and the parts of the plant. We worked with our Kinder buddies find and draw the different parts of the plant in our community garden. We also worked with our 7th grade buddies every week in our community garden. We planted new plants our community garden and learned how to help them grow.



Where does food come from?



“Combining different kinds of food, and also food comes from farms and animals” -Alex



“Food comes from farms” -Louie



“It comes from factories, farms, & plants” -Sienna



“Food comes from plants, animals, and people” -Stephania

“Farm workers and other farms that take care of animals. It also comes from Industrial and sustainable food systems” -Andres



“Food comes from the producers” -Richard





This is the most important bug the honey bee

ALL ABOUT BEES

BY APRIL BECERRA

WHY ARE BEES IMPORTANT?

Did you know honey bees are the most important bug? Do you know why? Honey bees help farmers to make our food. Honey bees **pollinate** and go from flower to the next, pollinating each one. Pollination is when a bee moves pollen from one flower to the next. When a flower is pollinated it means that it can make seeds that will make new flowers. Pollen is inside the flower. The pollen sticks on the bee while the bee is trying to eat the nectar inside the flower. **Nectar** is a sweet liquid inside the flower that bees like to eat. Then, the pollinated flower makes new seeds. If bees were not alive, we wouldn't have fruit, honey, or different types of food. This would happen because the plants need pollen to make seeds and without bees new plants would not grow. That's why honey bees are the most important bug.

For more information about bees, check out these resource:

- Busy Bees." Time For Kids. February 9,2016. <http://www.timeforkids.com/katie>.
 - Nancy Loewen .Busy Buzzers. Picture Window Books. Minneapolis,Minnesota. 2004.
 - Washington Post. "Obama has a plan to help save the bees. Newsela.2/10/16.<https://newsela.com/articles/beehealth-strategy/id/10051/>
-

-WORD WISE-

POLLINATION

Is when a bee moves pollen to one flower to the next

PESTICIDES

Is poison that kill the bad bugs and sometimes they kill the good bugs

NECTAR

Is the sweet liquid inside the flower that the bee eat.

MITES

Are little bugs that go on the bee and suck the blood of the bee and can kill it or make it weak

WHY ARE BEES GOING AWAY?

Bees have been disappearing for many years and are still disappearing! 42% of bee colonies are disappearing around the country. Scientists are still trying to find out why they are disappearing. One possibility is that mites are killing the bee.

Mites are little bugs that suck the blood out of bees. Mites can kill bees or give them diseases. Another reason is that queen bees are disappearing sooner. This is bad because the queen lays all of the eggs. If she doesn't lay the eggs, the number of bees will slowly go down to nothing. A third reason is that humans are cutting down flowers. This is bad because bees drink nectar from flowers. Nectar is a sweet liquid that bees eat as their food. They have a long tongue like a tube that they drink out of. Without flowers, bees don't have food. Finally, pesticides can be killing bees. **Pesticides** are a poison used by farmers to kill the bad bugs that eat the the plants. They sometimes kill the the good bugs that help the plants. This is bad because bees, ladybugs, and worms help the plants grow. These bugs help and if some pesticides get on them and they die. These are some reasons why are bees disappearing.

-FAST FACTS-

WHY ARE BEES GONE!?

42% of bee colonies are disappearing.

Queen bees are disappearing sooner.

Humans are cutting down the flowers and the bees home.

Mites in the bees are killing them.

Pesticides are killing the bees and other good bugs that help the plants.

SOIL AND WORMS

BY NOAH GUZMAN

WHAT IS HEALTHY SOIL?

Healthy soil is important for plants to be healthy. What is healthy soil? Do you know what healthy soil is? Healthy soil has 3 three layers. The first layer is Horizon A. Horizon A contains a lot of **humus** and **minerals**. Humus is broken down plants that were once apart of alive plants. Humus is important because it has **nutrients** that make the plants grow right and healthy. Minerals are nutritious things in soil that plants need to grow. The second layer is Horizon B. Horizon B contains less humus but it has more minerals and plants need minerals to grow. The last layer of soil is Horizon C. Horizon C has less humus than Horizon B but has way more minerals than Horizon B and Horizon A. Healthy soil has a lot of nutrients. We need nutrients so we can grow, soil also needs nutrients so that the plants can grow. Plants get nutrients for the soil by sucking up the nutrients with their roots. Roots are veins that plants have to suck up water, soil, nutrients, and minerals for the soil. Plants need minerals and nutrients to grow and to be healthy. And if your soil has all these thing then your soil is healthy and your plants will be healthy too!

-WORD WISE-

HUMUS

Broken down plants

MINERALS

Minerals are little bits of organic material that helps your plants grow

NUTRIENTS

What plants and people need to grow.

VERMICOMPOSTING

Composting with worms

DECOMPOSE

When food breaks down into compost

For more information about worms check out these resource:

- Resinsky, Natalie. [Dirt The Scoop on Soil](#). Minneapolis: Picture Window Books. 2003.
- [Soil](#). BrainPOP. 2-19-16.
<https://www.brainpop.com/technology/scienceandindustry/wastemanagement>
- [Natural resources](#). BrainPOP. 2-20-16.
<https://www.brainpop.com/science/energy/naturalresources/>



Here is a picture of someone holding worms in compost

WHY ARE WORMS IMPORTANT TO SOIL?

Have you ever heard that healthy soil has worms in it? You might be wondering, what do worms do to the soil? Worms help the soil by making it loose. Loose soil is good for plants because the roots for the plants can grow easily. Worms make holes in the soil so that water and air can get to the plant. Worms are also important because they **decompose** organic waste! Organic waste is left over vegetable from your meal. Decompose means when food waste breaks down into compost or into humus. Worms eat rotting leaves and organic waste so the plants have the nutrients to grow strong. Basically, worms make nutrients for the soil and the plants. They live in the soil so they work day and night to make the soil healthy. Worms are also great for composting! Vermicomposting is when you use worms to make compost for your soil so it is healthy and your plants healthy. Composting is good because it saves space in landfills and makes your garden healthy. If you want to vermicompost you will need to feed your worms organic waste: fruit, vegetable scraps, peelings, bread, pizza crust, cheese, egg shells, potato salads, cereal, tea bags, leaves, and coffee grounds. The things you can not feed them are: meat, bones, fish, bottle caps, aluminum foil, glass, cat and dog feces, rubber bands, sticks, woody plant parts, and plastic bags. These are the reason why worms are important to soil.

-FAST FACTS-

Did you know that composting with worms is called vermicomposting

Vermicomposting saves space in landfills so does composting

Having healthy soil can help you grow plants faster.

Organic waste is vegetable scraps



Plants are very important because they can produce food

ALL ABOUT PLANTS

BY ALLEN MARA

WHAT ARE THE DIFFERENT PARTS OF A PLANT?

Some people might be wondering, what are the different parts of a plant? The first part of a plant is the flower. There are different flowers everywhere. One type of the flower is a sunflower. Another type of flower is a tulip. A flower's job is to make pollen and to make new seeds. The flower also attracts pollinators like bees to collect pollen. The flower can come in many different shapes and sizes. The second part of a plant are the leaves. The leaves use water, air, and sunlight to make food for the plant. Through a process called photosynthesis, leaves get energy from the sun. The third part of a plant is the stem. The stem works like a straw to get water from the roots to the leaves. The fourth part of a plant is the seed. The seed is the beginning of the plant. Seeds come in many different shapes. The fifth part of a plant are the roots. The roots suck up water from the soil and the stem carries it to the plant. Each part of a plant has an important job, like the leaves get energy from the sun so it can grow, and the roots can suck up water to the stem and to the leaves.

-WORD WISE-

PHOTOSYNTHESIS

Photosynthesis is a process that a plant goes through to make food

CARBON DIOXIDE

Carbon dioxide is a type of gas that you breath out.

GLUCOSE

Glucose is a type of sugar that plants eat

NUTRIENTS

The healthy part of most foods

POLLEN

Pollen is a type of yellow powdery substance

WHAT DOES A PLANT NEED TO GROW?

Now you know the different parts of a plant. You may wonder, what does a plant need to grow? First, you need to add some soil. A plant needs soil to get nutrients from the earth. The way a plant gets nutrients from the earth is through its roots. The roots of a plant sucks up water and nutrients from the soil. Next, add some sunshine. A plant needs energy from the sun to grow and to make its food from energy. Then, add some water and carbon dioxide. A plant needs water, sunshine and carbon dioxide to do **photosynthesis**. Photosynthesis is a process that a plant goes through to make food for itself. The food they make for the plant is a sugar called **glucose**. Plants breathe in carbon dioxide and breath out oxygen for us to breath in. Finally, give your plant some loving care. That is all a plant needs to grow!

-FAST FACTS-

They're five parts of a plant:

1. The first part of a plant is the flower.
2. The second part of a plant is the leaves.
3. The third part of a plant is the stem.
4. The fourth part of the plant the seeds.
5. The fifth part of is the roots

For more information about plants, check out these resources:

- "Plant Anatomy." Fact Monster. 2/10/16. <http://www.factmonster.com/dk/science/encyclopedia/plant-anatomy.html>.
 - Speirs, John. The Magic School Bus Plants Seeds. 555 Broadway, New York NY 10012. Scholastic Inc. 1995.
 - "Photosynthesis." Fact Monster, 2/19/16, <http://www.factmonster.com/ipka/A0775714.html/>
-

THE PROCESS OF PHOTOSYNTHESIS

BY ANTHONY ZEPEDA

WHAT IS PHOTOSYNTHESIS?

People might not know what photosynthesis is. Photosynthesis is how plants make food. Did you know plants have to make their own food? Photosynthesis only happens with plants. To do photosynthesis, a plant needs sunlight, water and, carbon dioxide. Plants collect energy from sunlight. Chlorophyll makes plants green. Chlorophyll also traps the energy from the sun in the plants leaves. Chlorophyll lives in the leaves of the plants. Plants also need water to make photosynthesis. The roots suck water from the soil. The stem works like a straw to bring the water the leaves. Photosynthesis also use carbon dioxide. Once a plant has water energy from the sun and carbon dioxide it is ready to do photosynthesis. Photosynthesis makes a sugar called glucose. Glucose is the food for the plant. Photosynthesis also make oxygen. Humans breathe the oxygen that plants make. Now you know about the process of photosynthesis.

-WORD WISE-

CARBON DIOXIDE

Carbon dioxide is what a plant breaths in

CHLOROPHYLL

Makes plants green and traps energy from the sun

OXYGEN

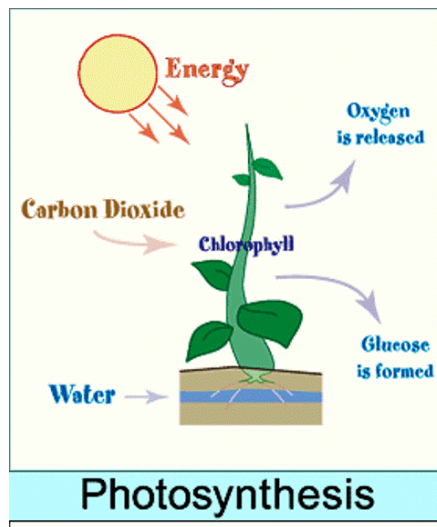
Oxygen is what animals and humans breathe

NUTRITION

Nutrition are food that healthy like fruits and vegetables

For more information about photosynthesis, check out these resource:

- "Photosynthesis." Fact Monster. February 2, 2016. <http://www.factmonster.com/ipka/A0775714.html> 1-9-16
- "Photosynthesis." Brainpop. February 2, 2016. <https://www.brainpop.com/science/cellularlifeandgenetics/photosynthesis/>
- PHOTOSYNTHESIS COMIC STRIP



THINGS THAT ARE FOR AND FROM PHOTOSYNTHESIS

WHY IS PHOTOSYNTHESIS IS IMPORTANT ?

Photosynthesis is important for many reasons. First, photosynthesis makes oxygen and humans need oxygen. Photosynthesis is important because people need oxygen. Plants use carbon dioxide and make oxygen. They give oxygen so we can live. If plants die, humans would die too. Without plants and photosynthesis humans would not have oxygen. Second, without photosynthesis plants would die. Glucose is the main source of nutrition for plants. Third, without plants, humans would not have food. Humans eat plants like fruits and vegetables. If plants were gone, animals would also be gone. So, humans could not eat animals or plants. Now you know why photosynthesis is important.

-FAST FACTS-

PHOTOSYNTHESIS needs:

1. CARBON DIOXIDE
2. SUNLIGHT
3. WATER

PHOTOSYNTHESIS makes:

4. OXYGEN
5. GLUCOSE



A seedling germinates into a plant

SEEDS

BY ANDREA HEREDIA

WHAT ARE SEEDS? WHERE ARE SEEDS?

A seed is something that makes a flower. Seeds come from plants and flowers all over the world. Seeds can look really different. Sometimes seeds come from a pod. Some seeds come in different shapes or sizes. Seeds come in fruit . They can come from the inside or the outside of fruit. For example, orange seeds are on the inside instead of the outside. Strawberries, on the other hand, have seeds on the outside of them.

HOW DOES A PLANT GROW FROM A SEED?

The seeds come off of the flower to make a plant. Some flowers have seeds that land on the ground. Some seeds float on the wind and other seeds are carried by animals. Then, the seed sprouts or germinates into a new plant. Germination is when a plant sprouts into a seedling or baby plant.

WHAT DOES A PLANT NEED?

A plant needs five things to grow. A plant needs: water, air, soil, sunlight, and space. The roots grab the water from the inside of the earth. Leaves capture sunlight from the sun! These are the five things that plants need to grow!

-WORD WISE-

SEEDLING

A seedling is when a seed sprouts or germinates into a plant

SEED

A seed is beginning of a plant

GERMINATE

When a plant grows from a seed

-FAST FACTS-

Plants need five things to grow

- 1.WATER
- 2.AIR
- 3.SPAC
- 4.SOIL
- 5.SUN

For more information about seeds check out these resources:

- Bodach, Vijaya. [Flowers](#). Mankato: Capstone press.

FOOD JUSTICE

THAT'S NOT FAIR <i>Sienna Beltran</i>	27
HOW CESAR CHAVEZ BECAME AN ACTIVIST <i>Pablo Ramirez</i>	39
DOLORES HUERTA'S LIFE <i>Andres Medina</i>	31
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What is food justice?

As part of our project we learned about how humans experience our food systems. The food justice movement seeks to make our food systems more just for all people.

Farmworkers' Rights

We watched the documentary film "Viva La Causa" about the NFWA's fight for farm workers' rights in the 1960's. We also watched "Food Chains" - a film about farmworkers' rights today. Guest speakers Carlos and Linda LeGerrette were activists who worked with Cesar and now run the San Diego Chavistas, a youth community service organization.

There are 3 parts of FOOD JUSTICE:

1. **Farm workers are treated fairly.**
Fair wage and basic human rights.
2. **Food systems are sustainable.**
System does not waste resources or harm the environment so it will last for a long time
3. **Everyone has access** to healthy food.
Affordable, near-by, organic food.

Food Access

We watched videos about people who live in food deserts and about how people survive when they do not have access to healthy, affordable food. We learned about gleaning, rescuing food that would be wasted and giving it to people who need it. A guest from Feeding America spoke about food banks and volunteer program.



Cesar Chavez and other farm workers deciding if they want a strike!

THAT'S NOT FAIR!

BY SIENNA BELTRAN

WHY ARE FARMERS RIGHTS IMPORTANT? HOW ARE FARM WORKERS TREATED?

Farm workers have been fighting for their rights for a long time. The fight continues today! Have you ever wondered who the people that pick your food are? Well that is an important question and you should know what the people that pick your food have to go through! A lot of farm owners treated all of their workers almost like slaves! Sometimes farm workers don't have basic human rights, like they didn't get bathroom breaks, days off, and clean water. Migrant farmworkers are the kind of farm workers that change their jobs to follow the work. Since they are very poor, they will take any job. They will work even if the growers pay them really poorly like, for example, some are only paid one dollar a hour! Growers took advantage until the farm workers had enough! In 1965, the Filipino union and the Mexican union joined forces and did a strike!! A strike is something people do when they are tired of their working conditions and they stop working for the growers until the growers change the conditions. During a strike the growers have no one to pick the crops. But there are some people called scabs who are people that continue the work in the fields during a strike. They are really poor so the growers ask them if they want to have a job and they take it. Fortunately, some of the workers got some scabs to leave the field! People all over the world have helped farm workers earn their rights. In the 1960s many people helped the farm workers like politician Robert Kennedy, young people and other unions. Eventually the farm workers won the strike and were paid a more fair wage! Today, farm workers are fighting for many of the same rights. Now you know how farm workers are treated and how they fight for respect and justice.

-WORD WISE-

DISCRIMINATION

When someone treats people differently because of part of their race!

MIGRANT FARM WORKERS

Farm workers that change their job to take any available job.

STRIKE

When workers stop working to demand better working conditions

SCAB

People that are very poor and work during a strike

WHY ARE FARM WORKERS TREATED UNFAIRLY?

Most people have treated farm workers really badly, why? Well keep reading and you will learn why. Farm workers have fought for their rights for a long time but for some reason they are still treated unfairly. One reason why farm workers are treated unfairly is something called **discrimination**. This means that they are treated differently because of their race! Many farm workers are Mexican, American and Latinos. Many of the growers were mostly white. In the 1960s and, in some cases today the growers thought that it wouldn't matter if they discriminated against them and only paid their workers a dollar a hour! Another reason why farm workers are treated unfairly is that growers and companies care more about making money than about their workers.

Well now you know why farm workers are treated unfairly. It's sad, but it is real!

-FAST FACTS-

What all farm workers should have:

- A fair wage
- Bathroom breaks
- Medical health care!

Strategies that farm workers use:

UNIONS

A union is a group of people that want to speak as one group.

STRIKE

A strike is something people do when they are tired of their working conditions and stop working.

BOYCOTT

A boycott is when farm workers tell the consumers not to buy the product that their owners own.

For more information about farmworkers' rights, check out these resource:

- Kent, Deborah. Migrant Farmworkers Buda, Texas. The Child's World. 2005.
- Nahmias Rick. Fair Food Project. 2016.
- Teaching Tolerance. Viva La Causa. 2012.
- Tafolla, Carmen and Teneyuca, Sharyll. That's Not Fair! San Antonio, Texas. Wings Press. 2008.

HOW CESAR CHAVEZ BECAME AN ACTIVIST

BY PABLO RAMIREZ

WHO WAS CESAR CHAVEZ?

Have you ever heard the name Cesar Chavez? I bet you have. If you want to learn more about What he did how and how he helped farm workers keep reading. Cesar Chavez was born March 31 1927 in Arizona. When he was young he lived in an adobe house and his father owned 400 **acres** of land. He was really happy but then his father went bankrupt. His family had to become a migrant farm workers. Migrant farm worker is someone who takes any job because they money. So, if the grower moves then they will move to that farm too. When he went to school he had a hard time learning and he got teased because he spoke spanish. When he was in 8th grade he dropped out of school to help his parents make more money for their family. When he was in his twenties he joined the Navy so he could make money. He left the Navy after World War II and then he started fighting for farm workers rights. He saw that the growers were treating farmers badly. They were treated like like they weren't human so he wanted help. He started the union, the National Farm Workers Association, the NFWA with Dolores Huerta. A union is an organized group of people that make their voices heard because they want to get justice. That was Cesar Chavez beautiful life.

-WORD WISE-

ACRE

An acre is a piece of land about the size of a soccer field. 400 acres is a lot of land.

UNION

Is a group of people who want to make their voice be heard

COALITION

Is all the people who helped cesar chavez

ALLY

Is the person who supported against discrimination and oppression

For more information about Cesar Chavez, check out these resource:

- Bollinger, Michele. 101 Changemakers Rebels and Radicals who Changed US History. Published by Haymarket Books:Chicago 2012.
- <http://chavezfoundation.org/>
- Kathleen Krull harvesting hope houghton mifflin harcourt @2003



This is Cesar Chavez and that behind him is the NFWA flag

WHO HELPED CESAR CHAVEZ?

Cesar Chavez received help from a lot of people. To make the NFWA work, he needed help from farm workers. A union is an organized group of people that make their voice heard because they want to get justice. The farm workers were fighting to get paid more, for bathrooms, breaks, and health insurance. Together, the union went on strike and went on a march. At the march it started off with seventeen people but then it had 500,000 people when they got to Sacramento on Easter. Cesar needed the union because the growers wouldn't just listen to one person so he needed help. Another person that helped Cesar Chavez was Dolores Huerta. She fought for farm workers rights and founded the NFWA. Dolores Huerta wanted to become a civil rights activist to help kids and farmers receive a better Education and better future. She also fought for women because they were getting treated badly because they were women. Cesar also got help from politicians. Robert Kennedy at that time was running for president and Cesar Chavez knew him so he asked for help from him because he had a lot of power. The NFWA was also supported by a coalition of young people, civil rights activist, and religious groups together to protest at grocery stores to tell people to not buy grapes. The last group of people was the consumers because they did not buy grapes. So the farmers could get the money. That is how Cesar Chavez became Cesar Chavez.

-FAST FACTS-

- Cesar Chavez was born in Arizona, 1927
- His dad went bankrupt and he became a migrant farmer
- He was in the Navy in WW II
- Started the union NFWA
- Cesar was also helped by politicians like Robert Kennedy
- Dolores Huerta wanted to become a civil rights activist to help kids and farmers receive a better Education and better future

DOLORES HUERTA'S LIFE

BY ANDRES MEDINA

WHO WAS DOLORES HUERTA?

Dolores Huerta was one of the most important women in our country. If you want to learn more about her then read on. Dolores Huerta was born April 10, 1930 in northern New Mexico. Dolores's father was named Juan Fernandez and her mother was named Alicia Fernandez. Her father was a miner field worker and her mother owned a 70 room hotel that often had farm workers stay as guest! Dolores's parents really helped the farm workers because they are the people who put food on your plates every day. Dolores later moved to Skoton and then graduated from high school. She then became an elementary school teacher. Her students were mostly kids of farm workers and she felt that she could do more to help them if she helped their parents. So, she started to work with an organization called the (CSO) which stands for Community Service Organization. She helped farm workers when they were going through tough times. Did you know that farm workers are still going through tough times? Years later, she joined a union in Delano, CA and helped most Filipino farm workers who wanted to be treated with respect and show the people that they were human. Then, in 1960 Dolores worked with Cesar Chavez to create the National Farm Workers Association (NFWA). As part of the NFWA, Dolores fought for farm workers' rights. She helped organize the Huelga, or a strike, against the grape growers. A strike is when the workers do not go to work because their is not fair conditions. Also, they told the consumers to not buy the grapes. That is called a boycott. They also would go on long marches like they went on one march and they traveled from Delano to Sacramento, CA and Dolores and Cesar led that march and it was real hard. The farm workers eventually won the strike. And this is how she grew up!

-WORD WISE-

UNION

Group of workers who wanted to be treated better

SCAB

A farm worker who works in the fields during a strike

Boycott

When you tell the consumers to not buy product

STRIKE or HUELGA

Not going to work because there is not fair conditions

NFWA

National Farm Workers Association is the union that Dolores and Cesar started



This is Dolores in her older age

WHY DID DOLORES HUERTA WANT TO BECOME AN ACTIVIST?

There are many reasons why Dolores wanted to become an activist. First she believed they deserve a fair wage. She wanted to make the farm workers not live in poverty any more so they, and their children, could have a better future. Another reason why is she felt farm workers and kids should be treated better in the fields. Farm workers were not treated humanely. For example, they didn't have bathrooms and that was embarrassing for everyone. Also, a lot of farm workers were traumatized by the growers and the police. During the strike, the police beat up Dolores. Now, she gets a couple thousand dollars to take care of herself. Another reason why she wanted to be an activist is because she felt that women were treated unfairly. For example, they were not allowed to use a bathroom and that was embarrassing for the women. Also, women were treated unfairly even in the union. Once, Dolores went to a meeting and counted 58 sexist comments. This means that men said "women cannot do things that men can do." She told the men what they were doing was wrong. Later she went to a different meeting and counted only 30 sexist comments. These injustices are what pushed her to be an activist.

-FAST FACTS-

Dolores huerta was born 1930 in New Mexico

Was an elementary school teacher

Helped make the NFWA

Fought for farm workers rights

Fought for women's rights

For more information about Dolores Huerta, check out these resource:

- Michele Bollinger 101 Changemakers and Rebels and Radicals who Changed US. History. Chicago: Haymarket Books. 2012.
- Kate,Schatz [RAD AMERICAN WOMEN A-Z](#). San Francisco:City Lights books,2015
- "Dolores Huerta: The Feminist Seed Is Planted." Dolores Huerta Foundation Jan 24, 2015 <http://doloreshuerta.org/2>

DOES EVERYONE HAVE ACCESS TO HEALTHY FOOD?

BY SADIE TERRY

WHAT IS FOOD ACCESS?

Do you think that everyone has healthy food? You will find out in this article. First of all, **food access** is when people all around the world can afford to buy the healthy food they need to eat. You should be eating fresh healthy food. There is a food icon called “Myplate” it shows what food you should be eating like fruits and vegetables. Second, **residents** all around the world don’t have access to healthy food. But in 2010 the Dietary Guidelines for Americans said that families are not eating enough fruits and vegetables. The WTO (World Trade Organization) is trying very hard to help everyone have healthy good food. Next, there are places all around the world where they give you free healthy food. An example of a place where they sell free healthy food is Feeding America. Lastly, it’s important that everyone has access to healthy food because you will have a strong immune system. People need healthy food because without it they could get sick. Another reason you should eat healthy food is because you could get **diabetes**. Diabetes is when you have too much sugar in your blood. This sugar is also known as glucose. Diabetes happens when sugar does not get processed in your body. The sugar that comes from your body is created when you eat grains, dairy and starchy vegetables. Now you know what food access is and that not everyone has access to healthy food.

-WORD WISE-

FOOD ACCESS

Food access is when you could buy the food you need.

FOOD DESERT

A food desert is where there is no health, affordable food.

RESIDENTS

Residents is another word for people.

CULTURALLY RELEVANT FOOD

That means food from where they come from or from someone’s culture.

DIABETES

Diabetes is when you have too much sugar in your blood.

For more information about food access, check out these resource:

- “11 facts about food deserts.”Do something.org. February 11, 2016. <https://www.dosomething.org/facts/11-facts-about-food-deserts>.
- “Learn about food access.”The Food Trust. February 11, 2016. <http://thefoodtrust.org/food-access>
- “Food Security.” World Trade Organization. February 12, 2016. <http://www.who.int/trade/glossary/story028/en/>
- “Healthy food access.”Google for kids. 2/10/16. <http://www.usda.gov/documents/7-Healthyfoodaccess.pdf>



This is a picture of a convenience store at a food desert. This is an example of not having access to healthy, fresh, affordable food.

WHAT IS A FOOD DESERT?

Do think that you know what a **food desert** is? Well if you don't you will learn something in this article. First, a food desert is somewhere people can not find healthy, fresh food because there are no grocery stores you could only buy food at convenience stores and fast food. It's really hard for people to afford healthy food in a food desert. Also humans that live in food deserts have a really hard time finding **culturally relevant** food. Culturally relevant food is food that comes from where you come from. For example, if I'm from Mexico I might not find what I need to make tamales. Second, there are a lot of food deserts. There is exactly 23.5 million people living in food deserts in the U.S. The ERS (Economic Research Service) said in 2009. 23.5 Americans, including 6.5 children, live more than 1 mile away from a farmers market or a grocery store. Did you know that there are millions of food deserts in the US? Third, living in a **food desert** is bad because you really don't eat any healthy food. Most of the people who live in food deserts eat fast food or buy food from a convenience store. A convenience store is gas stations or 7 eleven. Kid's all around the world eat too much fast food. Many people are afraid that households don't have enough healthy food for people that live in food deserts. First Lady Obama is fighting for more healthy food access in food deserts. Unfortunately, there are still a lot of people who live at food deserts in the U.S.

-FAST FACTS-

More than 23.5 people live in food deserts.

People that live in food deserts live more than 1 mile from a grocery store.

Residents all around the world don't have access to healthy food.

Healthy food is really hard for people to afford.

Most of the people that live in food deserts eat fast food.



We do have enough food on the planet for everyone, but some keep it to themselves.

FOOD FOR EVERYONE

BY SHELDON KAISEI HEDGES

IS THERE ENOUGH FOOD ON THE PLANET FOR EVERYONE?

Have you ever wondered if there is enough food on the planet for everyone in the world? Well, there is enough food but not everyone has enough to eat. There are three big reasons why we know we have enough food. The first reason is how many calories we make. In the world, we have two or three times the amount of food that we need to feed everyone. On average about 2,000 calories is needed for every person. We produce 2,868 calories per person. The amount of calories on the earth for every person per day tells us that there is enough food on the planet for everyone. The second reason is food waste. 40% of our food is wasted in America. If 40% of our food is wasted in America then how many tons do you think is wasted before it even gets **consumed** by humans. 833 tons of is wasted before it gets consumed by a human. The third reason is a lot of people don't have food and suffer from it. About 870 million people suffer from hunger each day. And a surprising thing is almost 17 million of those people are children. So, does that answer the question we have enough food on the planet for everyone. The answer is, we do have enough food on the planet for everyone.

For more information check out these resource:

- Koba, Mark. [A Hungry World: Lots of Food, in too few places.](#)
 - Fraser, Evan. Can We Feed Everyone. Google for kids. February 10,2016.
 - Food Rescue. Food Rescue: A Food Waste and Hunger Solution. YouTube. February 11, 2016.
-

-WORD WISE-

DISTRIBUTION

The part of the food system where food is packaged and transported to the people who eat it

CHRONIC HUNGER

When someone suffers from hunger every day

APPROXIMATELY

When you guess about something but, it's not exactly true

CONSUMED

Food is eaten by a human

EXPENSIVE

A huge amount of money

HEALTHY

To be fit and mostly eat nutritious foods

WHY DO SOME PEOPLE NOT HAVE FOOD?

Imagine if you didn't have any food, or at least **healthy** food. How do you think life would be? Pretty bad, right? There are a few reasons why people do not have food. First, most of the people who don't have food don't have a lot of money. Don't you think it's amazing how healthy food like broccoli, oranges, and carrots is way more **expensive** than food that is not nutritious. But, 50 million people in the U.S. aren't able to afford healthy food to stay healthy. The second reason is that we have a **distribution** problem. 2.5 billion tons will probably be harvested by the world farmers this year, and that is a lot to handle and to get to people who need it. Guess what? 33 percent of that food is wasted before gets consumed. As a result, **approximately** 805 million people suffer from **chronic hunger**. The third reason is that there are a lot of people to feed. Have you ever thought about how many people the world has to feed? 7 billion people! It seems crowded but, some people estimate that in less than a century, the world will be fifty percent more crowded. We will need to support 10.95 billion people by the year 2100. These are the three big reasons why some people don't have food.

-FAST FACTS-

There is enough food on the planet for everyone

2,868 calories are available for every person each day

1.7 billion people are over weighted in the world

30% of our food is wasted in America

805 million people suffer from chronic hunger

Healthy food is more expensive than junk food

2.5 billion tons will probably be harvested by world farmers this year

FOOD CHOICES

THE NUTRITION FACTOR <i>Nicolas Farwell</i>	39
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OUR SCHOOL LUNCHES <i>Isabella Ruiz</i>	43
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What food choices do we make?

We are part of the food system! The food choices that we make affect our own healthy and influence the food system around us. We learned that it is important to ask questions when you are making food choices:

- What food do we choose to eat?
- What questions should we be asking when we choose food to eat?
- Where did my food come from?
- How far did my food travel?
- Who picked my food?
- Is my meal nutritious?

We explored different places to buy food like grocery stores, CSAs (Community Supported Agriculture) and farmers' markets. I brought in food from my CSA box to share with the students. Parents brought in healthy snacks for students to try on Tuesdays. We also started to exercise every morning. Our "Outside Fun" helped us get energized for the day!

What was your favorite healthy snack?

What is your favorite healthy snack at home?

“My favorite healthy snack so far in class is pineapple, cantaloupe, and ants on a log. At home my favorite healthy snack is any fruit that is fresh.” – Maya

“ My favorite healthy snack in class is Richie’s mom’s tangerines and tangerine muffin. At home my favorite healthy snack is fruit.” –Allen



“ My favorite healthy snack in class so far is the fruit leathers. At home my favorite healthy snack is granola bars.” –Noah



“My favorite healthy snack in class so far is Richie’s mom’s muffin and Pablo’s mom’s salad. At home my favorite healthy snack is fruit salad.” –Sadie

“My favorite healthy snack in class so far is Richie’s mom’s muffins. At home my favorite snack is cucumber with tajin and lime.” –Sienna

“My favorite healthy snack in class so far is fruit stripes and Pablo’s mom’s salad. At home my favorite healthy snack at home is an apple.” –Nicolas

“ My favorite healthy snack in class so far is Pablo’s mom’s salad and the fruit bars. At home my favorite healthy snack is cutties.” –Sheldon



“ My favorite healthy snack in class so far was Pablo’s mom’s salad. At home my favorite healthy snack is apples with peanut butter.” –Xander

THE NUTRITION FACTOR

BY NICOLAS FARWELL

WHAT IS NUTRITION?

Do you know what our body needs to survive? If not than you're in the right place. Well here we go, **nutrients** and calories supply your body with energy and vitamins that you need to keep yourself healthy. You can get nutrients from the fruits, vegetables, oats, and the dairy that you eat or drink. My opinion is that vegetables are the best because there are lots of nutrients in vegetables. Something else that is really cool is that kids need more nutrition than adults. The average adult needs 1 gram of protein of per kilogram each day. There are different ways your body tells you when you are hungry. For example, if you want something to eat that's your body saying that you need more "fuel" or that you need more calories. Something else that is cool is that the eyes, skin, hair, and the teeth show whether the body's **nourishment** is good or bad. You can make the choice if you want to eat healthy. You can look at the back of most boxes at the nutrition label for information. To be healthy you should choose fruits and vegetables. Also choose foods with less fat, sodium, and added sugar. Follow these rules and you should have good nutrition.

-WORD WISE-

NUTRIENTS

Healthy food for you body

NOURISHMENT

The food or other nutrients necessary for growth, health, and good condition

CARBOHYDRATES

Type of nutrient that has calories in bread.

DIET

When you restrict from eating something to be healthier

OBESITY

When you eat too many junk food.

For more information about nutrition, check out these resource:

- "Nutrition" February 9, 2016 FactMonster <http://www.factmonster.com/ipka/A0882305.html>
- "My Plate" ChooseMyPlate February 11, 2016 <http://www.choosemyplate.gov/MyPlate>
- "Human Nutrition" FactMonster February 20, 2016 <http://www.factmonster.com/encyclopedia/science/nutrition-human-nutrition.html>
- "Nutrition" Brain Pop. February 30, 2016 <https://www.brainpop.com/health/nutrition/nutrition/>



There are lots of healthy foods like fruits and vegetables

WHAT FOOD IS HEALTHY?

If you want to stay healthy you need to balance your diet with fruits, vegetables, protein, dairy and you also need to exercise to burn off all of the extra fat or calories. So let's start with fruit. Most fruits straight from the tree or bush are low in fat, sodium, and **carbohydrates**. Fruits also have a lot of nutrients in them. For example, bananas have potassium and vitamin C. Strawberries help prevent heart disease and cancer. Now let's move on to Vegetables because I think those are most healthy out all the categories. Did you know that chili peppers are good for colds? Did you also know carrots are good for your eyesight. If there is anyone there with bad eyesight than carrots are for you vegetables, like fruits, have a lot of vitamins and nutrients that your body needs. Now let's talk about protein, did you know that grilled chicken is a great source of protein. Something else that is high in protein is fish. The final part in your diet is fats and carbs. Carbs (carbohydrates) and fats are used as "fuel" or calories for your body. Calories are important because you need energy. but don't eat foods with lots of fat because it can cause obesity. When you exercise you burn off all the extra fat. Now you know what foods you should have in your diet to be healthy.

-FAST FACTS-

Did you know that there are five different categories of food that are supposed to be on your plate?

They are:

1. FRUITS
2. VEGETABLES
3. GRAINS
4. PROTEIN
5. DAIRY

ORGANIC FOOD

BY SAMANTHA LEE

WHAT IS ORGANIC FOOD?

Did you know what makes organic food organic? What makes organic food organic is it can't be grown with **chemical** or **fertilizers** or **artificial pesticides**. Pesticides are chemicals that kill bugs that eat crops. Next it can't be **genetically modified**. Genetically modified means it can change the way food looks like make it bigger or change the color of the food or look the same of other food or make it more healthy. If the food comes from a animal it can't be raised with **growth hormones**. Growth hormones make animals grow faster than they do naturally. Organic food also can't be treated with **radiation**. Radiation when it kills bugs and has a longer storage life and long time to get mushy or moldy. Many people believe that organic food is healthier because it can give you lots of energy and you can get really sick from not eating healthy. Another reason is people who eat organic food says it is tastier but that has not been proven. But something that has been proven is that organic food is healthier to eat. Because, if you buy one apple that is not organic, it can have about 6 or 7 pesticides on it. It can be a little more money than other food but it is better to eat. Since organic food takes more time it to make it cost more money then food with pesticides. Now you know what the organic food is and what makes it organic.

-WORD WISE-

ORGANIC

Food made with no pesticides.

GROWTH HORMONES

Chemical that makes animals grow faster than they normally grow

FERTILIZER

Animal poop that help plants grow

RADIATION

It kills bugs so food has longer storage life

PESTICIDES

It is supposed to kill or repel pest on plants to make food

For more information about organic food, check out these resource:

- <http://www.factmonster.com/ipka/A0933210.html>
- "Factmonster" 2/10/16
- <http://www.sustainable table.org/566/where-can-you-find-sustainable-food>
- "Where can i get sustainable food" 2/11/16



This is a pitcher of the national organic program

WHERE CAN I GET ORGANIC FOOD?

If you want to know where you can get **organic** food, and about organic food then keep reading. First, you can find organic food at farmers market. A farmers market is a place you can go to get food from farmers. Some farmers at farmers market sell organic food like fruit and vegetables. But, the farmers may not sell **organic** food which means they use pesticides. Some foods are not labeled organic food so always ask the farmer. Now, you can also join a food club or CSA. A CSA stands for community supported agriculture which is a way customers can buy organic food. Between months of June to October it is when food in the CSA is delivered. You can also find frozen fresh and organic food in grocery stores look for labels that say the food is organic. Some food is not labeled so you need to ask employee or the store manager if the food is organic. The USDA the US Department of Agriculture decides which foods can have the organic label. Look for the label USDA organic that means it is 95% **organic** If you want something that is totally organic you can also look for food that has a label 100% **organic**. If you find a label that says “made with organic ingredients” that means that is 70% **organic**. Now you know where to get **organic** food.

-FAST FACTS-

Organic food is healthy food because it has no pesticides

The US Department of agriculture gets to put the labels on organic food

Most stores sell organic food just look for a label that has 100% organic



This is a picture of an unhealthy lunch. It is unhealthy because it has lots of sugar and fat and not fresh fruits or veggies.

OUR SCHOOL LUNCHES

BY BELLA RUIZ

ARE SCHOOL LUNCHES HEALTHY?

School lunches are what kids get if they do not have lunch to eat from home. Sometimes school lunches are healthy. They are healthy because they have fruit and veggies. Sometimes school lunches are not healthy because it can just have pizza or chips.

DO KIDS LIKE SCHOOL LUNCHES?

Healthy school lunches are good because it has fruits and veggies and fruit and veggies have vitamins. But, kids do not like healthy school lunches. Sometimes kids will throw away their food which equals a big food waste and it can be \$100,000 worth food everyday. Students are eating the potatoes and throwing away the fruits and veggies then go buy unhealthy more unhealthy food like juice and cheetos.

IS ANYONE TRYING TO CHANGE SCHOOL LUNCHES?

Yes, people are try to change them into healthier lunches. For example, Mrs. Obama is trying to change them by passing laws. One principals can do is hire chefs to make taster food that students will eat for lunch at school. At our school Mr. Trevor's **class did a project** about our school lunche they are trying to change it to something kids will eat.

FOOD WASTE AT OUR SCHOOL

To find more about our school lunches I interviewed Kwynn Solomon. She is in Mr. Trevor's class and their project is about our school lunches. They are learning where our school lunch comes from and if it's healthy. They are trying to change it to something healthy that kids will like so there is not a big food waste and the school will not pay for food that kids throw away.

BELLA: Do you think the school lunch is healthy?

KWYNN: I think it is healthy but can be healthier by being more fresh.

B: Do you think there should be any changes to our school lunch?

K: I think there should be two changes: one, be more fresh and two change the food to something kids will like.

B: Do you think we should order food from closer restraints?

K: Yes, if it is not too expensive.

B: Should the food be more fresh?

K: Yes, and we can also get food from our garden so it's fresh

B: Should we have twice every month have chips or jello but have a fruit or something healthy on the side?

K: Yes, but have a mini dessert once or twice a month depending on the weather.

B: What would you do if you could change the lunch?

K: I would add salad, fruits and veggies, and mini breakfast morning hub and lunch and dinner at hub

B: Should we have a vote for what new lunch we should have so we are not picky and then we don't make a lot of food waste?

K: Yes, we should ask what the students would like so they are not as picky and they eat the food.

B: Should we find a restraint that does not charge so much so we could get food from there?

K: Yes, but it would have to be good food that kids would like and eat.

-WORD WISE-

FOOD WASTE

Food waste is when someone throws away lots of food that they did not finish

SCHOOL LUNCH

School lunch is what you get at your school cafeteria

SUSTAINABLE

Sustainable means organic and healthy food and does not use lots of resources

HEALTHY FOOD

Healthy food is food that is organic.

EXPENSIVE

Expensive means that something costs a lot of money

FARMERS MARKETS AND CSAS

BY GISELLE ALEXA BRAVO

WHAT IS A FARMERS MARKET?

Farmers markets are not inside like grocery stores they are out in the open. Farmers markets are also usually small not big like grocery stores. Farmers markets happen when farmers from all over the area come to sell the things they grow at their farm. Some farmers markets sell almost everything! They sell veggies, fruits and milk, eggs, and meat. People choose to buy food from a farmers markets because it is healthier. People think it is healthier because farmers markets food is fresh. It is fresh because the food comes straight off farm. Farmers markets are getting more popular than grocery stores. According to the USDA, farmers markets are getting more popular because they are way more healthy than grocery stores. Imagine this you are walking through a farmers market and you find some great food like lettuce and carrots. But there are other good foods too their so you have to choose! But you don't just choose one, you choose both. Then you go to the meat area and you buy the meat you love. Then you go home and you eat your non-pesticide, organic and delicious food. These are the reasons people choose buy food from a farmers markets and not from a grocery store

-WORD WISE-

PESTICIDES

A chemical that is used to kill bugs that are on the crops they can make people very sick.

USDA

United State Department of Agriculture.

ORGANIC

When a food is organic and it is made without pesticides.

CSA

Community Supported Agriculture

CONSUMERS

People who buy the food.

For more information about farmers markets and CSAs, check out these resource:

- www.rd.com/healthy-eating/13-thing-you-should-know-about-farmers-markets/
 - Jones,lauren. "five tips for farmers market shopping" "kidtopia" "July 22 2013" www.pbs.org/food/featruer/five-tips-on-farmers-market-shopping/
 - christopher wanjek feb 13 www.livescience.com/18460-farmers-markets-hospitals-eating-helthy.html
-



Farmers markets are good because they have the healthiest food ever.

WHAT IS A CSA?

A CSA is Community Supported Agriculture. In a CSA, a consumer buys food directly from a farmer. Consumers of a CSA can sometimes only buy veggies and fruit but they can buy milk, meat, and eggs from the same farmer. People can pick it up or they can have it delivered to them. The farmer uses the money to buy seeds, water, and etc. Also farmers can have farm stands to sell food to consumers. Farm stands can be on road sides or in a big place. There are three reasons why people choose to buy food from a CSA. The first reason is that CSAs are like farmers markets but they deliver the food to you instead. The second reason is that The food from a CSA is healthier than food at grocery stores. Also, the fruits and veggies are straight off of the farm so it is healthy and more fresh than grocery store food. Finally, the grocery store food can have pesticides on it. In a CSA, the food does not have pesticides on it. Pesticides are a thing or chemical that farmers use to kill bugs on plants. Pesticides can be on grocery store food because they can be on grocery store food is from an industrial food system. In a sustainable food system the food has no pesticides on it. These are the reasons why people should buy food from a CSA.

-FAST FACTS-

Did you know you can buy your food at these places....

FARMERS MARKETS

Farmers Markets are a food area where you can buy your food.

CSA
Community Supported Agriculture.

FARMER STAND

A small stand where farmers sell their food.

GROCERY STORE

It's a big place where there is some organic food.

FOOD WASTE

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Where does food waste go?

Often, our food waste is sent to landfills. To explore food waste we watched documentary series called “Wasted.” We learned that food waste is the #1 product in our landfills! We also learned that a lot of the food that is thrown away could be eaten. We went to our local landfill to learn about where our trash and food waste goes and how to operate a landfill safely. We learned about the negative impact of food waste in landfills, like leachate and methane gas!

Food waste does NOT have to go to the landfill! We learned about composting as a way to reclaim food scraps, turning them into nutrient rich fertilizer for soil and plants. Students documented food waste in our own community by doing a trash audit. We sorted out food that could be composted or eaten because it was perfectly fine. Gleaning or food recovery is another way to prevent food from going to the landfill AND the food goes to people in need at food pantries and food kitchens.

What did you learn about food waste?

“What I learned about food waste is that people throw away healthy and good food.” – Andrea

“What I learned about food waste is that everybody is throwing away food in the packages that are fine and it fills up the landfill.” – April



“What I learned about food waste was that people waste a lot of good food.” – Alora

“What I learned about food waste was that there's a lot of food in landfills and that it is the number one product.” – Samantha

“What I learned about food waste is that people are suffering because they don't have food.” – Nicolas

“What I learned about food waste is that many people waste food in america.” – Josh

“What I learned about food waste is that food is being wasted around the world and that's bad because it makes a toxin called leachate.” – Ximena



“What I learned about food waste is that we waste a lot of food” – Richard



“What I learned about food waste is that people waste food and if that mixes with water it makes leachate which is a toxic sludge.” –Xander

FOOD WASTE

BY ALEJANDRO MARQUEZ

HOW MUCH FOOD IS WASTED?

We are in a **food system** which means that our food goes through a lot of steps to get to our plate. Did you know that there are steps after it gets to our plate too? We **waste** a lot of food and that is bad and we need to change that. The U.S is the world's largest food waster. People in our country **waste** $\frac{1}{3}$ of the food that is produced. Some studies say that 40% of food doesn't get eaten. We throw away so much food it weighs as much as 123 Empire State Buildings. In 2013, 133 billion pounds of food worth \$161 billion dollars was lost in the U.S. Over 100 million people around the world waste food. 34 million tons of food is wasted. Food waste is the #1 product in **landfills**. Landfills are a place where you dig up a hole and put all sorts of stuff like paper, metals, etc. 20% - 40% of food goes to **landfills** and that is bad because it could make methane gas. Methane gas is a greenhouse gas that is caused by food waste in the landfills. Methane is a huge climate change problem because it could kill people that are really close. If food waste were a country it would #3 in greenhouse gas and one of those gases is methane gas. That is how much food is wasted and why food waste is bad.

-WORD WISE-

WASTE

Waste is something like garbage or junk

LANDFILL

A place to dispose of waste

FOOD SYSTEM

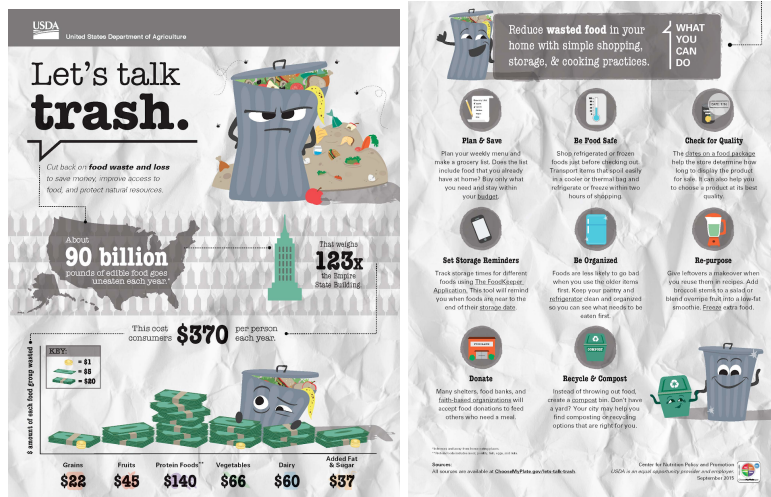
All of the steps that food goes through before your plate and after your plate.

GLEANNING

Saving food from landfills and giving it to people who need it

For more information about food waste, check out these resource:

- Pulitzer Center. "The Big Waste: Why Do We Throw Away So Much Food?" Youtube. 2/24/16. <https://www.youtube.com/watch?v=1aH7RwODORE>.
- Washington post. "Stop wasting food! Student volunteer helps America fight hunger and waste" Newsela. <https://newsela.com/articles/foodwaste-tech/id/13676/>.
- Food Rescue, "Wasted Food." <http://www.wastedfood.com/food-rescue/>



An infographic about how much food is wasted

WHY IS FOOD WASTE VALUABLE?

Why is food waste valuable? Food is really valuable for us but it gets wasted and that's really bad for us. First, food waste is good for compost. Garden waste and food scraps are organic waste. Organic waste and food waste is good for compost. Nutrients are healthy foods. We use compost for nutrients for soil. Nutrients are healthy foods and what people and plants need to grow. If we don't put food in the compost bin, it would go to the landfill. Food waste is either going to a landfill or burnt by an incinerator. Food in the landfill creates methane gas. Methane(CH₄) is a huge climate change problem because it could cause global warming. The next reason why food waste is valuable is that it can be given to people who are hungry. Rescued food is being saved from landfills all the time. This is called **gleaning**. 1 out of 6 Americans are food insecure. This means that people that don't have access to healthy food. We waste a lot of food because we are lazy and we need to change that. If you have extras try your best to save it and give it to someone who needs it. You can also compost your waste. That is why food waste is valuable and why to work hard to save food waste.

-FAST FACTS

- 20% - 40% of food goes to **landfills** and that is bad because it could make methane gas.
- We throw away so much food it equals to 123 Empire State Buildings
- One reason why food is wasted is good food that looks bad is the wrong size is wasted



All this food was gleaned rescued from the garbage by these people.

GLEANING IS AWESOME!

BY ALORA ROMO

WHAT IS DUMPSTER DIVING?

Do you think dumpster diving is gross? But did you know some people do it for a living! Hundreds of people save good food that was going to be wasted and give it to people that have **low-incomes** and are hungry mostly because they can't afford to buy it. These people are called **gleaners**! Have you been wondering where gleaners get the food? Sometime gleaners make agreements with big companies and ask if they can take some food that the company does not want. The company either say yes or no. Other times gleaners really dumpster dive and get good food that has already been thrown away but is still edible. Edible means you can eat it. Why is this good food being wasted? Farmers throw away food because the food might look weird and consumers won't buy it. Stores throw food away because it's past it's sell-by date or the food container says it's expired so they cannot sell it. But, often, the food is still edible and it is going to waste. Even if the food is past it's sell by date does not mean it will make you sick. This is how gleaners get food.

-WORDWISE-

GLEAN

Gleaning is rescuing food waste or you might also think about it as dumpster diving.

INCOME

Income is how much money you make.

LOW-INCOME

Low-income is when you make less money.

LEACHATE

Leachate is toxic sludge in landfills that is caused by food waste.

EDIBLE

Edible means it's safe to eat or you can eat something edible.

WHY DO PEOPLE DUMPSTER DIVE?

The whole reason why people dumpster dive is to make sure there is no food waste! People glean to prevent the food from going to landfills. The food waste has liquids in it so it mixes with the other trash in a landfill and makes **leachate!** Leachate is toxic sludge at the base of landfills. Leachate is really bad because it can get in the soil if there isn't a liner to keep it in. If it gets in the soil it will make the water we drink and swim in bad. Food waste in landfills also makes a gas that's bad called methane gas. Methane gas is bad it causes climate change. In fact, it's worse than carbon dioxide! But there's also a positive thing about methane gas. There are tubes in the landfill that brings it into a building and spins a wheel. Then it makes electricity that is used to power homes. The other reason why people glean is to get food that would be wasted to people who need it. Most of the food that people glean goes to the homeless shelters and food banks. 23 million people and 16 million kids could and might go hungry! 2,100 pounds of food has been donated to those in need. One organization that collects food and gives it to people who need it is Feeding America. Feeding America also helps five million people a week! That's why people dumpster dive!

-FAST FACTS-

40% of food goes to waste because we don't eat it.

Leachate also can kill the creatures that live in the water.

23 million people and 16 million kids could and might go hungry!

Feeding America is really awesome because they gather so much food for all people.

There's lots of people that are over fifty years old and don't have the healthy food they need!

For more information about gleaning, check out these resource:

- USDA. "Let's Glean." USDA. 2/10/2016.
http://www.usda.gov/documents/usda_gleaning_toolkit.pdf
- "Food Rescue". 2/10/2016.
http://www.usda.gov/documents/usda_gleaning_toolkit.pdf#ytr4



This is how much food is wasted on daily basis

WASTED FOOD

BY LOUIE AVILA

Food waste in our country is growing because everybody keeps on throwing away food. Over 100 million people around the world waste food. America is the world's largest food waster. Food goes to waste because it is expensive to transport and keep cold. It feels like a crime, if the food doesn't sell right away then the stores get rid of it. 40-60% of crops on independent farms never make it off the farm because it is the wrong size. In 2012, 34 million tons of food are dumped in the landfill. Methane is a huge climate change problem. Landfills are a huge contributor to methane gas. We waste food at our school too. I noticed kids throw away food that is open and not open that they don't eat. I noticed foods like yogurt, grilled cheese, broccoli, carrots, milk, cheese, apple juice, and fruits are getting thrown away every day. I noticed the school lunch is the same food every week and it should change every month to something new. To find out more I interviewed Ms. Chris. Ms. Chris takes care of our school lunches. I interviewed her to learn about how much food is wasted every day at our school.

How much food is wasted a day?

- Ms. Chris said, “there's not a certain amount each day.
- On days of Pick-Up Sticks and pizza, very little food is wasted because everybody likes it.
- A lot of food is wasted when classes go on a field trip and don't tell Ms. Chris first so she can order less lunches.

How come the school can't give it to the poor?

- The reason we can't give it to the poor is because if someone has a food allergy the school is liable.
- People can say the school gave them food poisoning from foods like cheese, milk, yogurt, and dairy products.

How come you guys don't save the food?

- “Entrees can only be served one time.”
- Ms. Chris must keep hot food temperatures over 145 degrees
- To reheat an item and re-serve it, is not a food standard.

How come you don't save it for the hub kids?

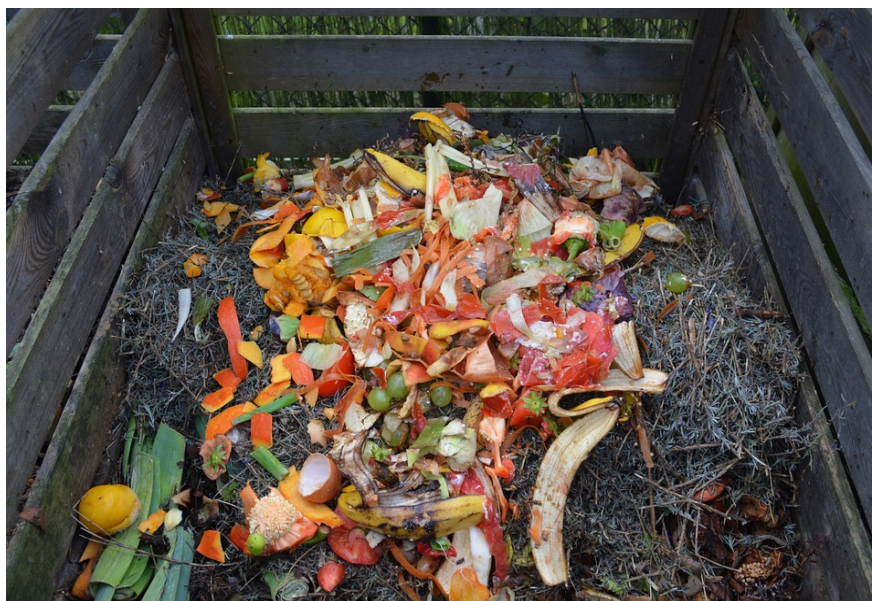
- “I do save the food for the Hub kids,” Ms. Chris says.
- “I leave all the fruits and vegetables for Hub and staff.”

Why did you choose this job?

- Ms. Chris was with High Tech High way back years ago in Point Loma.
- She really enjoyed making kids happy.
- Ms. Chris likes being involved with the school atmosphere.
- When High Tech High opened up in Chula Vista, 5 years ago, Ms. Chris moved down to work here.
- This job allows Ms. Chris to be with her kids in the morning.
- Lastly, she enjoys feeding kids nutritious food.

Where does our food come from?

- Our food comes from South Bay School District's kitchen.
- Everything is cooked there and sent to Ms. Chris.
- It's all kept in big heaters here at school.
- Pick Up Sticks come from the Pick Up Sticks store.
- Domino's pizza comes from them.



This is a picture of compost with a green layer and a brown layer in a composting bin.

COMPOSTING

BY XANDER JACOB VALERIO X

WHAT IS COMPOST ?

Compost is basically **recycling** food scraps to make fertilizer for plants. Sometimes people use **worms** to help them compost, and sometimes people compost by putting a **green waste**, a **brown waste** and in a pile, then wait. For a long time compost can be used to make fertilizer for plants. The fertilizer is the better soil for the plants. Compost is a material that mostly contains decayed materials, that are put into help the soil. People compost with items such as lawn clippings, moist food, particles, and **manure**. Compost needs green and brown waste. In short, composting is a way of reusing organic waste. We can compost: Fruit, veggie scraps, bread, bakery products pasta, leaves, grass clippings, egg shells, cotton, wool, burlap, leather, paper, straw, hay, cow steer, horse, chicken, manure from plant and grain eating animals, ground bush (wood chips), tea leaves, tea grounds, coffee grounds, filters, plant prunings, and weeds. Things that we can't compost include: meat, chicken, fish, salad dressing, cooking oils, grease, cat and dog feces, cheese, butter, dairy products, sawdust from treated lumber, twigs, sticks, plastic, foil, rocks, and other inorganic materials. Now you know how to compost!

-WORD WISE-

GREEN LAYER

The green layer is the layer in the composting bin which is all the vegetable and fruit scraps.

BROWN LAYER

The brown layer is the layer in composting bin where you put all the dry twigs and leaves.

VERMICULTURE

Vermiculture is composting with worms.

RECYCLING

Recycling is basically reusing paper, cardboard, plastic.

MANURE

Manure is cow poop or penguin poop which helps the soil

HOW DO INSECTS HELP US COMPOST ?

Vermiculture is composting with the amazing but ugly worms. Composting with worms is a magnificent way to recycle meal scraps and paper. Worms are amazing composters. The Red Wigglers are the best to use for house composting. These are the things you could feed composting worms: Fruit, vegetable scraps, peelings, baked goods like bread and pizza crust, cheese, egg shells, potato salad, cereal, tea bags and leaves, coffee grounds and filters, paper. These are the things you can not feed the composting worms: Meat and bones, fish, bottle caps, aluminum foil, glass, cat and dog feces, rubber bands, sticks, woody plant parts, plastic bags. Worm bedding is an important part of vermiculture. You may have your worm bin below the kitchen sink, in the basement, or in the garage. Keep in mind worm composting is made in a shallow bin of about 10-12 inches deep because it is similar to microbial. The worm has to be in a shallow bin. That is what vermiculture is, composting with worms.

-FAST FACTS-

COMPOSTING 101
All you need to know about composting!

1.

VERMICULTURE
Composting with worms to make better soil AKA good fertilizer for plants.

2.

RED WORMS
Are the best for home composting.

3.

COMPOST
Makes good and better fertilizer AKA better soil for plants.

4.

WORM BEDDING
Worm bedding is a very important part of vermiculture

For more information about, composting check out these resource:

- [A Guide For Home Composting And Environmentally Responsible Gardening.](#) City Of Chula Vista
- Kraus Stephanie,Going Green,Time For Kids,Feb 10th 2016,https://docs.google.com/document/d/1v0TU56cV_6ighRMpbzdU-FEyVP5jzt5EJlxD9CXXCCw/edit
- Flores Elizabeth, "New Ways To Grow Traditional Native American Crops." NewsELA, Feb 10th 2016,https://docs.google.com/document/d/1v0TU56cV_6ighRMpbzdU-FEyVP5jzt5EJlxD9CXXCCw/edit
- "Manure." Fact Monster, Feb 10th 2016, https://docs.google.com/document/d/1v0TU56cV_6ighRMpbzdU-FEyVP5jzt5EJlxD9CXXCCw/edit



This is a picture of trash going in the big hole that they make so they have more room for more trash.

WHERE DOES TRASH GO?

BY ARIADNA IBARRA

WHAT IS A LANDFILL? HOW DOES IT WORK?

Do you know what a **landfill** is? A landfill is a big hole where all of the trash that gets thrown away goes. Your trash goes in the trucks and takes it to a landfill located around your city. When it gets to a landfill, the bulldozers push our trash into piles so they have more space for incoming trash. They cover it up at the end of the day because they don't want the animals to eat the food, and so other people don't have to see all the trash. At the bottom of the landfill there is a landfill liner. The landfill liner is made of cement and keeps trash and **leachate** in. Leachate is a toxic sludge made of water from food waste, poison, and chemicals from the trash. If the liner was not there, the leachate would leak into the dirt. This would be bad because the leachate would poison our soil and water. Sometimes trash is burned instead of being put in a landfill. This is called **incineration**. Those are the important parts of a landfill.

For more information about landfills check out these resource:

- Gibbons, Gail. RECYCLE! New York: Little, Brown and Company. 1992.
 - Resinsky, Natalie. Dirt The Scoop on Soil. Minneapolis: Picture Window Books. 2003.
 - "Waste Management." Brain Pop. 1/15/16.
<https://www.brainpop.com/technology/scienceandindustry/wastemanagement/>
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-WORD WISE-

LANDFILLS

A landfill is a big hole where all of the trash that gets throw away goes.

INCINERATION

The process of burning trash so they get rid of it

LEACHATE

A toxic sludge made of water from food, waste, poison, and chemicals from the trash

CLIMATE CHANGE

When the weather changes over the years. Our climate is getting warmer and weather is getting more extreme.

METHANE GAS

A greenhouse gas that causes climate change.

ARE LANDFILLS GOOD OR BAD?

Do you think landfills are good or bad? Some people think landfills are good. Each person in America creates four pounds of trash every day. Most of the trash goes to a landfill. If we didn't have landfills, we would have a lot of trash around us, which we wouldn't like. Unfortunately, landfills are not good because they are filling up too fast, and people are having a hard time finding areas for new landfills. People don't want landfills around them because if they live by a one, it will probably stink. Landfills are also bad because they are filled with food waste. 40% of our food is being wasted because we don't eat it. Food waste in landfills is really bad because it make **methane gas!** Methane gas is a huge problem, and is bad for the environment. Methane is a greenhouse gas that causes **climate change**. Climate change is when the weather is different over time. The climate is getting warmer and the weather is getting more powerful or extreme. We can stop climate change by driving less and putting less food waste in landfills. For example when people in restaurants order too much food then they can eat, a lot of times it goes to waste. When my family and I go out to eat, we only order a little bit of food, then order more later if we are still hungry. We order more food. That is how my family and I don't waste too much food in a restaurant. Now you know a little bit about landfills and can decide if they are good or bad.

-FAST FACTS-

How much do we waste in San Diego?

What is our landfill?

19% is food waste

37% is paper

1% is soil

10% plant waste

11%is metal and glass

4% is textiles

11% is polymers

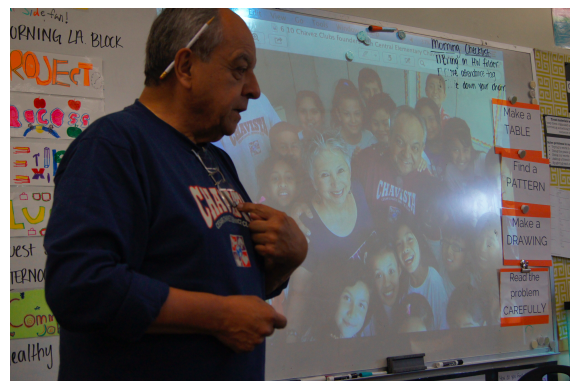
What did you learn about farmworker's rights?

"They fight for their rights and families because they were treated wrong." - Anthony

"That they fight for their rights. Farmers get sick a lot because they are getting sprayed by pesticides." -Pablo



They are important because they're human too. The boss treats them like they are nothing."
-Sadie



"The farmworkers were not treated fairly. And I also learned about Cesar Chavez and Dolores Huerta."
-Alora

What did you learn about food access?



"I learned that food access is when people have healthy, fresh and, affordable food."
-Samantha

"A food desert is where there is no grocery store. The only stores there is are stores like 7 eleven."
-Stephania

"I learned that food access is when you have good healthy food. Food insecure is when people can't get access to healthy food."-Xander

"Food access is when people don't have access to healthy food and go to food banks like Feeding America." -Andres

