5th Sci / SS. (Bold)

Draw a model of a plant you see

- Your model may be a drawing or written out.
- It should have labels for each part.
- It should have some way of explaining how photosynthesis (how plants make their own food) works
- Using arrows might help to show photosynthesis

I'm not actually grading this but if I was…

1= almost no work or just started

2=plant drawing with some labels or limited depiction of photosynthesis

3=complete plant drawing with full description of photosynthesis elements

4=all of the above with correct spelling and added details such as type of plant or zoom in cutaway drawings

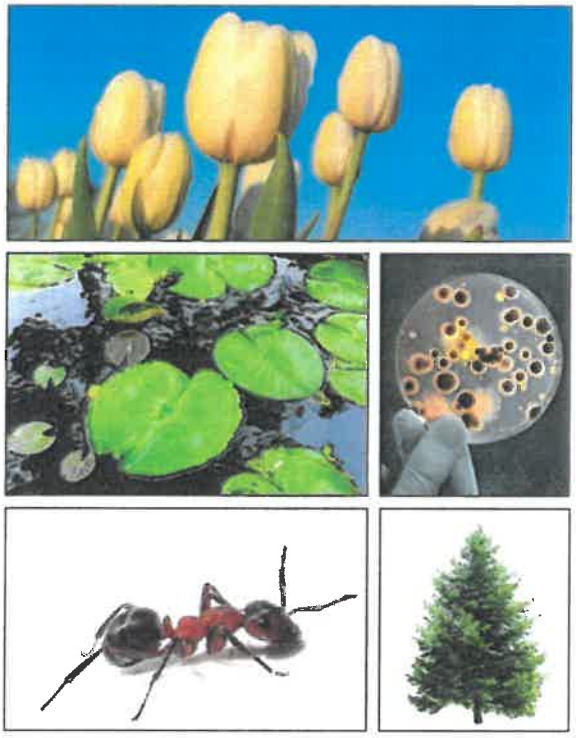
This video has some information you may find helpful.
Video link: https://youtu.be/lln136eMI4g

Lesson: Parts of Plants

Lesson Topic: Photosynthesis

Question 1:

Which of these organisms are part of the plant kingdom?



Question 2:

Your friend gave you a bonsai tree and told you to take care of the tree for him. Which of the following will you need to take care of the tree?

- [ ] food

- [ ] water

- [ ] sun

- [ ] hay

Question 3:

Why is photosynthesis important for plants?

Question 4:

Plants need sunlight to make the food they need to survive. However, plants can also survive during the night and when it is cloudy. Why do you think this is?

- [ ] Plants do not use food when it is nighttime or cloudy.
- [ ] Plants make enough sugar from photosynthesis when it is sunny to have food for when it it is nighttime or cloudy.

Question 5:

Which of the following do plants use to make sugar?

Check all that apply.

- [ ] sunlight
- [ ] nutrients in the soil
- [ ] water
- [ ] meat
- [ ] carbon dioxide

Question 6:

The process of photosynthesis can only happen when sunlight hits a cell. Where do you think photosynthesis happens in this plant?

Question 7:

Drag each part of the process of photosynthesis to the correct box.

Needed for Photosynthesis	Produced by Photosynthesis

Write them in the correct box.

nutrients from soil

water from the ground

sunlight

carbon dioxide

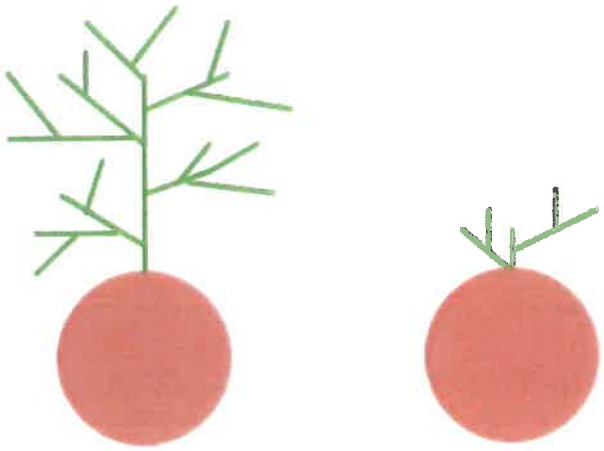
oxygen

sugar

water

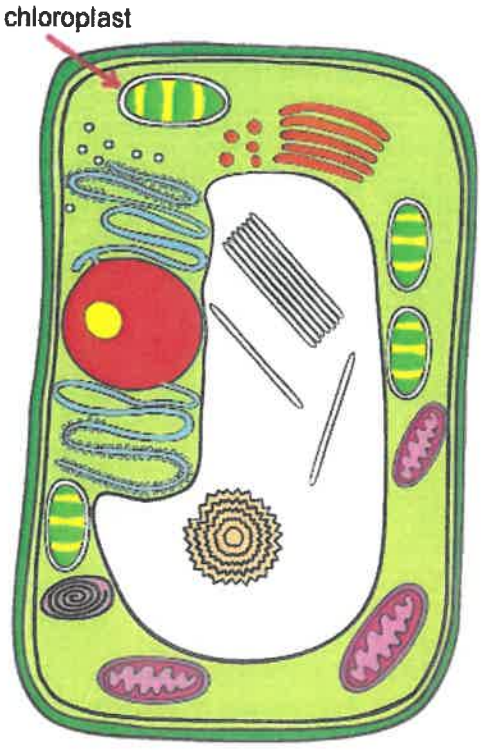
Question 8:

Your class buys two plants that are the same size. You put one on a table in the middle of your classroom, and one on the windowsill, and water them both every day. Here is a picture of the two plants after two months. The plant on the left was on the windowsill, the plant on the right was on the table. Why do the plants look different?



Question 9:

Chloroplasts are the part of a plant cell that make food from the Sun. Based on this information, what process must occur in the chloroplast?



- ☐ plant growth
- ☐ reproduction
- ☐ photosynthesis
- ☐ burning food to make energy

Question 10:

Circle
~~Click~~ the tree in this image that would be least likely to be performing photosynthesis.

Question 11:

Only chloroplasts can _____.

- [ ] be green in color
- [ ] exist in leaves
- [ ] trap light from the Sun for photosynthesis

Question 12:

Could plants survive without chloroplasts?

- [ ] no
- [ ] yes

Question 13:

How are plants different from animals?

- [ ] Animals make their own food, but plants do not.
- [ ] Plants make their own food, but animals do not.
- [ ] Animal cells contain a nucleus, but plant cells do not contain a nucleus
- [ ] Plant cells contain chloroplasts, but animal cells do not contain chloroplasts.

Question 14:

Photosynthesis is _____.

- [ ] the process plants use to make sugar from the sun's light
- [ ] the process plants use to make seeds
- [ ] the process plants use to make new plants
- [ ] none of the above

Question 15:

What is chlorophyll?

- [ ] The green material in chloroplasts that can absorb sunlight for photosynthesis.
- [ ] The green organelle that allows the plant to burn food to make energy.
- [ ] The process that plants use to create sugar from water, sunlight, and air.
- [ ] A seed that has not started germinating.

Question 16:

What is a chloroplast?

- [ ] the organelle in plant cells where photosynthesis happens
- [ ] a tiny plant that has a stem and leaves
- [ ] a single cell that can grow into a new plant
- [ ] an organelle that transports water throughout the plant

Question 17:

Describe the process of photosynthesis. What ingredients does a plant need in order to complete photosynthesis? After photosynthesis ends, what products does the plant have?

Question 18:

Where do plants get their food?

- from decomposition
- from water
- from other plants
- from eating
- from photosynthesis

Question 19:

Which of the following are required for photosynthesis?

Check all that are true.

- water
- sunlight
- sugar
- carbon dioxide
- oxygen

Question 20:

Which of the following are produced from photosynthesis?

Check all that are true.

- sugar
- carbon dioxide
- nutrients
- water
- oxygen

Question 21:

In what part of a plant does photosynthesis occur?

- the roots of a plant
- in the flowering part of a plant
- the leaves of a plant
- underground

Question 22:

In what part of the cell does photosynthesis occur?

- cell membrane
- chloroplast
- chlorophyll
- mitochondria

Lesson Topic: Parts of a Plant

Question 1:

Roots help plants in the same way that _____.

- [ ] a fire burns wood to make heat energy
- [ ] an anchor holds a boat in place
- [ ] a refrigerator keeps food ready to use
- [ ] paper towels soak up water from the floor
- [ ] a basket can hold many apples at once

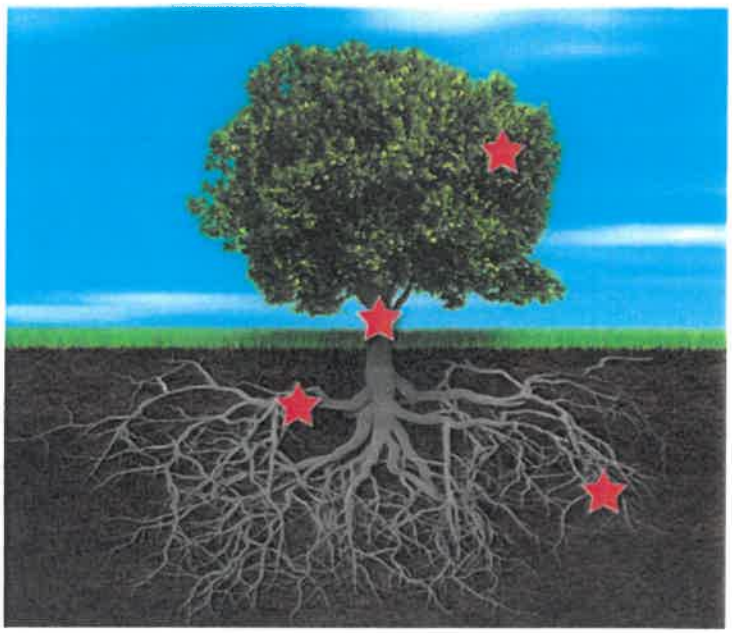
Question 2:

What directions do roots usually grow in?

- [ ] down
- [ ] to the sides
- [ ] up

Question 3:

Which part of the plant is where photosynthesis occurs?



Question 4:

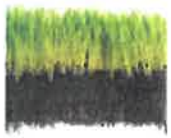
In what directions do stems grow?

- [ ] up
- [ ] down
- [ ] to the sides

Question 5:

Classify each plant as having a taproot or fibrous roots.

Taproot	Fibrous Roots

Question 6:

What is a taproot?

- [ ] the part of a plant that holds up the leaves and flower
- [ ] a single root that grows straight down into the ground
- [ ] the part of a plant that helps it reproduce
- [ ] the part of a plant where photosynthesis occurs

Question 7:

What are fibrous roots?

- [ ] the roots where photosynthesis takes place
- [ ] roots that spread out in many different directions through the ground
- [ ] a stem that is flexible and thin
- [ ] the part of the plant that holds up the leaves and flower

Question 8:

Drag the correct labels to each part of the plant.

makes food

holds up the leaves and transports water, nutrients, and food

holds the plant in place and absorbs water and nutrients

stem	leaves	roots

Question 9:

What is the most important part of the plant?

- [ ] root
- [ ] stem
- [ ] leaf
- [ ] All parts are equally valuable.

Question 10:

What is the difference between fibrous roots and a taproot?

Question 11:

Which part of the plant produces food for the plant?

- flowers
- roots
- stem
- leaves

Question 12:

Which plant parts are responsible for keeping a bush from falling over or blowing away due to wind?

Check all that are true.

- [ ] leaves
- [ ] flowers
- [ ] roots
- [ ] stem

Question 13:

What parts of the plant are shown?

Check all that are true.

- [ ] leaves
- [ ] roots
- [ ] flowers
- [ ] stems

Question 14:

Which part of the plant:

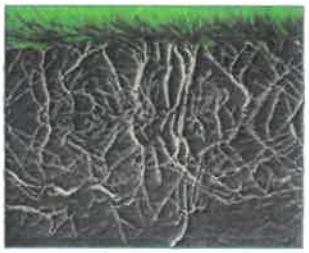
- stores food for the plant
- carries water, minerals, and food to other parts of the plant
- helps hold up the plant

- ( ) the flower
- ( ) the stem
- ( ) the leaves
- ( ) the roots

Question 15:

Which of the following show taproots?

Check all that are true.

- [ ] 
- [ ] 
- [ ] 
- [ ] 

Lesson Topic: Lesson Vocabulary Review

Question 1:

Photosynthesis is _____.

- [ ] the process plants use to make sugar from the sun's light
- [ ] the process plants use to make seeds
- [ ] the process plants use to make new plants
- [ ] none of the above

Question 2:

What is chlorophyll?

- [ ] The green organelle that allows the plant to burn food to make energy.
- [ ] A seed that has not started germinating.
- [ ] The green material in chloroplasts that can absorb sunlight for photosynthesis.
- [ ] The process that plants use to create sugar from water, sunlight, and air.

Question 3:

What is a chloroplast?

- [ ] a tiny plant that has a stem and leaves
- [ ] the organelle in plant cells where photosynthesis happens
- [ ] an organelle that transports water throughout the plant
- [ ] a single cell that can grow into a new plant

Question 4:

What is a taproot?

- [ ] the part of a plant that helps it reproduce
- [ ] a single root that grows straight down into the ground
- [ ] the part of a plant where photosynthesis occurs
- [ ] the part of a plant that holds up the leaves and flower

Question 5:

What are fibrous roots?

- [ ] the part of the plant that holds up the leaves and flower
- [ ] a stem that is flexible and thin
- [ ] the roots where photosynthesis takes place
- [ ] roots that spread out in many different directions through the ground

Correct Answers

Lesson: Parts of Plants

Lesson Topic: Photosynthesis

Question 1:
Flowers, trees, and lily pads are all in the plant kingdom. The ants and the bacteria in the dish are not members of the plant kingdom.

Question 2:
sun | water

Question 3:

Question 4:
Plants make enough sugar from photosynthesis when it is sunny to have food for when it it is nighttime or cloudy.

Question 5:
sunlight | carbon dioxide | water

Question 6:
Photosynthesis happens in the leaves of plants. Photosynthesis cannot happen underground because there is no sunlight underground. The flower part of the plant is used for reproduction. Photosynthesis does not occur there.

Question 7:
In order for photosynthesis to occur, a plant needs water from the ground, nutrients from the soil, carbon dioxide and sunlight. The products of photosynthesis are sugar, oxygen, and water.

Question 8:

Question 9:
photosynthesis

Question 10:
Trees without leaves or other green parts have very few cells with chloroplasts that can perform photosynthesis. These evergreen trees keep their green needles all year, meaning that they can perform photosynthesis in the winter while other trees cannot.

Question 11:
trap light from the Sun for photosynthesis

Question 12:
no

Question 13:
Plants make their own food, but animals do not. | Plant cells contain chloroplasts, but animal cells do not contain chloroplasts.

Question 14:
the process plants use to make sugar from the sun's light

Question 15:
The green material in chloroplasts that can absorb sunlight for photosynthesis.

Question 16:
the organelle in plant cells where photosynthesis happens

Question 17:

Question 18:
from photosynthesis

Question 19:
water | carbon dioxide | sunlight

Question 20:
sugar | water | oxygen

Question 21:
the leaves of a plant

Question 22:
chloroplast

Lesson Topic: Parts of a Plant

Question 1:
an anchor holds a boat in place | paper towels soak up water from the floor | a refrigerator keeps food ready to use

Question 2:
down | to the sides

Question 3:
Photosynthesis happens in the leaves of the plant. Leaves are responsible for making the food for the plant to survive.

Question 4:
up | to the sides

Question 5:
The carrots and turnip both have a taproot, which is one large main root that absorbs water and nutrients. The grass and the mangrove tree both have fibrous roots, which spread out in many directions.

Question 6:
a single root that grows straight down into the ground

Question 7:
roots that spread out in many different directions through the ground

Question 8:
The roots of a plant hold the plant in place and absorb water and nutrients from the ground. The stem holds up the leaves and transports water and nutrients. The leaves use photosynthesis to make food for the plant.

Question 9:
All parts are equally valuable.

Question 10:

Question 11:
leaves

Question 12:
stem | roots

Question 13:
stems | leaves

Question 14:
the stem

Question 15:
MC2 | MC3

Lesson Topic: Lesson Vocabulary Review

Question 1:
the process plants use to make sugar from the sun's light

Question 2:
The green material in chloroplasts that can absorb sunlight for photosynthesis.

Question 3:
the organelle in plant cells where photosynthesis happens

Question 4:
a single root that grows straight down into the ground

Question 5:
roots that spread out in many different directions through the ground

To be used with the April 13, 2020, issue

SCHOLASTIC News

Name: _____

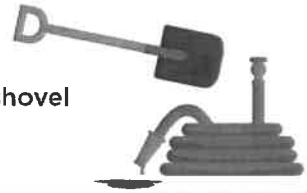
Reading Procedural Text
Common Core R.3

Make a Compost Pile

After reading "What a Waste!," study the informational text below to learn how to turn food waste into compost. Ask an adult to help you make a compost pile. Before you dig in, read the instructions below and answer the questions.

Materials

- "Brown material" like fallen leaves, nut shells, small twigs, shredded newspaper
- "Green material" like grass clippings and food scraps (such as vegetable peelings, eggshells, old bread, or fruit rinds—but NOT meat, oils, or dairy products)
- garden soil
- a garden fork or shovel
- a garden hose or watering can



Steps

1. Find a dry, shady area about 3 feet long.
2. Spread brown material in a layer that's about 6 inches thick.
3. Add a 2-inch-thick layer of green material.
4. Add a 1-inch-thick layer of soil. This layer will help absorb the odor.
5. Add some water. The pile should be moist but not soggy. You may want to cover your pile with a tarp to protect it from rain.
6. Repeat steps 2-5 until the compost pile is about 3 feet high.
7. Every few weeks, mix the compost. This allows air to enter the pile. You may notice your compost steaming. It's normal for an active pile to heat up. It can get as hot as 170°F!
8. In several months, your compost will become cool, crumbly, and dark. Some composters call this "black gold." Add this finished product to garden soil. It's full of nutrients that will help keep your plants healthy.

1. Circle the items you can include in a compost pile:

chicken	dead leaves	yogurt
eggshells	vegetable oil	onion peels

2. Sketch a diagram that shows the layers of a compost pile. Label each layer.

3. What is the purpose of adding a layer of soil to your compost pile?

_____

4. How can you prevent your compost pile from getting soggy?

_____

5. Why is it beneficial to make a compost pile? Refer to the article for additional support.

_____

_____

_____

_____

_____

To be used with the April 13, 2020, issue

SCHOLASTIC News

Name: _____

Writing a Letter
Common Core W.4

Your Opinion Counts!

Use this template to write a draft of a letter to a local, state, or national elected official. Once you've planned out your ideas, rewrite or type a final version. Then work with your teacher or a family member to mail it.

_____
(today's date)

Dear _____,
(official's name)

I am _____

_____

_____

I would like you to consider _____

I think this change will help _____ because _____

_____

_____

Finally, I want to say _____

_____

_____

Sincerely,

_____
(your name)

_____
(your address)

_____
(your city, state, and ZIP code)

APRIL 13, 2020

SCHOLASTIC

NEWS

Edition 5/6

Teen activist Alexandria Villaseñor

CAN KIDS SAVE THE PLANET?

Meet a teen who's speaking up to help protect the environment.

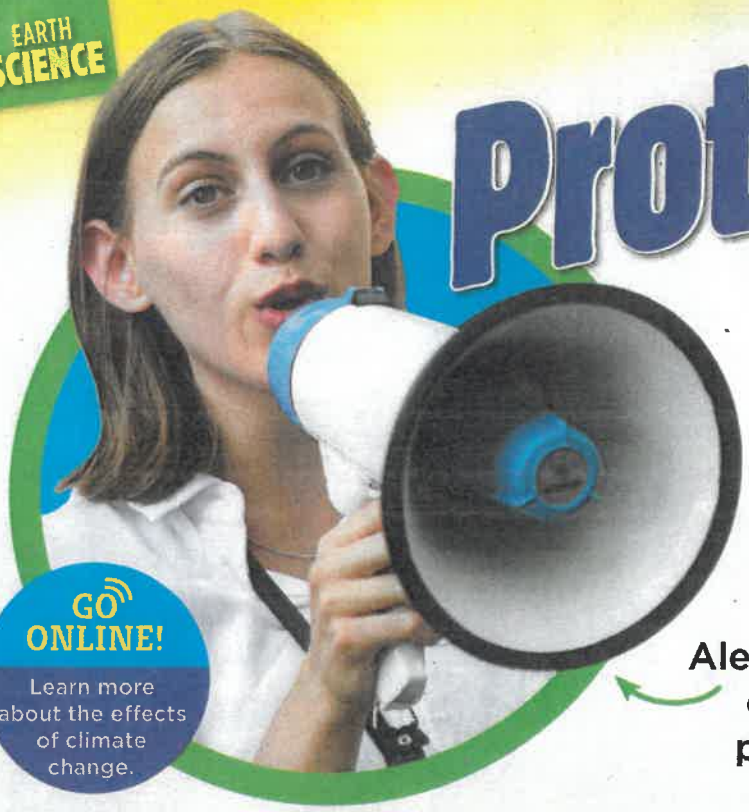
Earth Day is April 22. Find out more at scholastic.com/sn56.

INSIDE THIS ISSUE

What **YOU** can do to fight food waste p. 4

EARTH SCIENCE

Protect Our Plan



GO ONLINE!
Learn more about the effects of climate change.

Alexandria Villaseñor is speaking out about the future of the planet—and she's not alone.

As You Read, Think About: Why might young people like Alexandria be so concerned about climate change?

Alexandria Villaseñor has the same routine nearly every Friday. She grabs a couple of cardboard signs and takes the subway across New York City. Then she spends most of the day sitting on a bench outside the headquarters of the United Nations (U.N.). Inside, leaders from countries around the world gather to try to solve problems.

Week after week, Alexandria is there to demand action on climate change—the gradual change in Earth's average temperature and weather patterns. Climate change is affecting sea levels and leading to more extreme weather events.

Throughout history, Earth's temperature has changed naturally. But most scientists agree that our use of **fossil fuels** is playing a big role in the current global warm-up (*see "The Greenhouse Effect"*).

Alexandria, age 14, and other young activists are calling on world leaders to battle climate change. Alexandria was inspired by a teen from Sweden named Greta Thunberg, whose Fridays for Future protests have spread to other countries. Last September, Alexandria helped plan a protest march that drew tens of thousands of kids and teens to the streets of New York City.

Alexandria recently spoke with *Scholastic News* about why she thinks kids should speak out about the future of the planet.

Scholastic News: **Why did you become a climate activist?**

Alexandria Villaseñor: I was visiting family in California in November 2018, when a wildfire broke out in the town of Paradise. Even though the fire was more

WORDS TO KNOW

fossil fuels *noun, plural.* coal, oil, and natural gas formed from the remains of prehistoric plants and animals

renewable energy *noun.* energy from a natural source, such as wind or sunlight, that will never run out

et!

than 100 miles away, we ended up getting a lot of the smoke, and it inflamed my asthma (a medical condition that can make breathing difficult). That made me want to research why these fires were happening. I started to see the connection between wildfires and climate change, and that made me want to get involved.

SN: Tell us about your Fridays for Future protests at the U.N.

AV: When I first started striking, I was alone for many weeks. But then more students started to join me. What's really incredible is more students are getting involved and making their voices heard. And the movement is growing internationally, which is so important.

SN: What do you hope to achieve?

AV: We want to see world leaders take steps to get us off of fossil fuels and to see them transition to **renewable energy**. Every single protest is continuing to put pressure on them to take action to protect my generation's future.

SN: How have your classmates reacted to your activism?

AV: Even if they aren't protesting every Friday, they're starting to get involved in activism in their own ways. For example, I have a friend who ran for student body president and had a plan to make lunchtime zero waste and eliminate plastics. Seeing how their mindset is changing is something that's really inspiring for me.

—Interview by Alessandra Potenza

Note: The interview was edited and condensed by the editors of *Scholastic News*.

The Greenhouse Effect

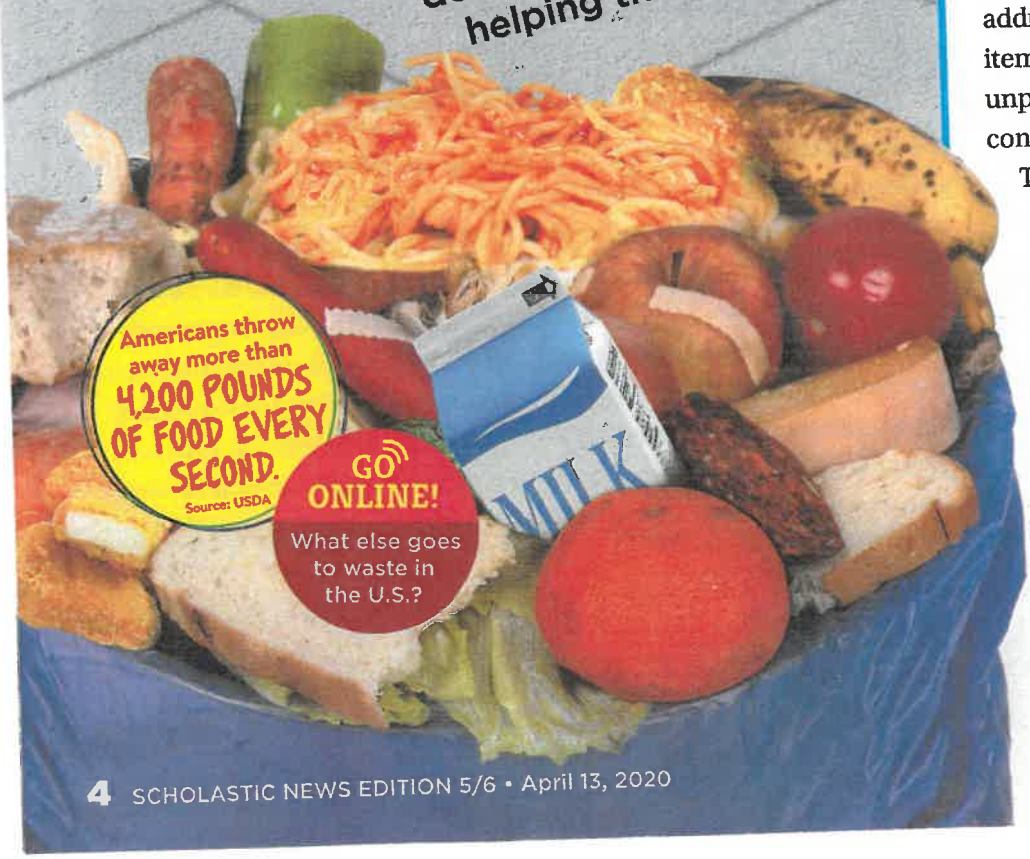
The process that keeps Earth warm enough for us to live here is called the greenhouse effect. The problem, scientists say, is that we're producing too much of the greenhouse gases, like carbon dioxide, that trap heat in the atmosphere. Here's how it works.

1. Energy from the sun provides Earth with light and heat.
2. Clouds and Earth's surface reflect about 30 percent of that energy back toward space.
3. Greenhouse gases trap some of that reflected energy in the atmosphere, warming the planet further.
4. People burn fossil fuels to power cars, homes, and businesses. That releases more greenhouse gases into the air.
5. Even more heat is trapped in the atmosphere, causing temperatures on Earth to rise.

CIVICS

WHAT A WASTE!

Students at a school in Maryland are cutting down on food waste—and helping those in need.



Think about the last meal you had in your school cafeteria. Did you finish all the food on your tray? If not, a juicy apple or a container of milk likely ended up in the trash.

The students and staff at Lincoln Elementary School in Frederick, Maryland, got tired of seeing so much of their food going to waste. In January, the school started a program to use the unwanted food and drinks to help others—and the environment.

Helping Hand

Tossing food into the trash is wasteful in many ways. For one thing, that food could be used to help the hungry. In 2018, more than 37 million Americans were unable to afford healthy food on a regular basis.

The staff at Lincoln started a share table in the cafeteria to help address this problem. Students put items they decide not to eat—like unpeeled bananas and unopened containers of yogurt—on it. Then they pack the food into coolers and donate it to a local organization that provides meals for people in need.

"You just feel happy inside because you're helping other people," says Lincoln fifth-grader Eliseo Sanchez.

WORDS TO KNOW

landfill *noun.* an area where waste is buried between layers of dirt

produce *noun.* fresh fruits and vegetables

Wasteful Ways

The kids at Lincoln are also preventing more food from ending up in a **landfill**. About one-third of all food produced in the U.S. never gets eaten, according to the U.S. Department of Agriculture.

That happens for many reasons. Farmers often dump **produce** that is bruised or oddly shaped because customers aren't likely to buy it. Grocery stores toss damaged cans and boxes that contain perfectly edible food.

But who's mainly to blame for all the wasted food? Individual consumers are—even though we may not realize it.

"Everybody thinks that they waste very little," says Roni Neff. She's a food waste expert at the Johns Hopkins Center for a Livable Future in Baltimore, Maryland.

The problem is that people often buy more food than they need and then end up throwing away leftovers.

$161 BILLION WORTH OF FOOD is wasted in the U.S. each year. Source: USDA

Students at Lincoln Elementary collect uneaten food in their cafeteria and pack it into coolers.

A Global Problem

All this food waste is bad news for the planet. When food rots in landfills, it releases methane—a type of greenhouse gas that is contributing to climate change.

Tossing an uneaten apple isn't just a waste of food. It also wastes other resources—from the water used to grow the apple to the fuel used by the truck that delivered it to the store.

25% OF ALL FRESH WATER used in the U.S. is used to grow crops that we never eat. Source: Natural Resources Defense Council

Making a Change

The students at Lincoln Elementary are doing their part to eliminate food waste. Each school day, they collect about 150 leftover lunch items and donate them to the Frederick Rescue Mission. The organization uses the food to provide free breakfast to people in need in the community.

Lincoln's share table has made students more aware of what they eat—and don't eat. Eleven-year-old Lily Frizen now avoids overloading her plate—in school and at home.

"It changed me a lot," Lily says. "It'll change you too."

—by Alessandra Potenza

WHAT YOU CAN DO

- Keep track of what you put on your plate. If you're not eating everything you take, change your behavior.
- Have today's leftovers for tomorrow's lunch or dinner.
- Talk to the adults in your family about donating extra packaged food to a food bank or homeless shelter.
- Recycle natural foods, like fruits or veggies that have gone bad, by composting. When composted food decays, it turns into a natural fertilizer that helps plants grow.

U.S. HISTORY

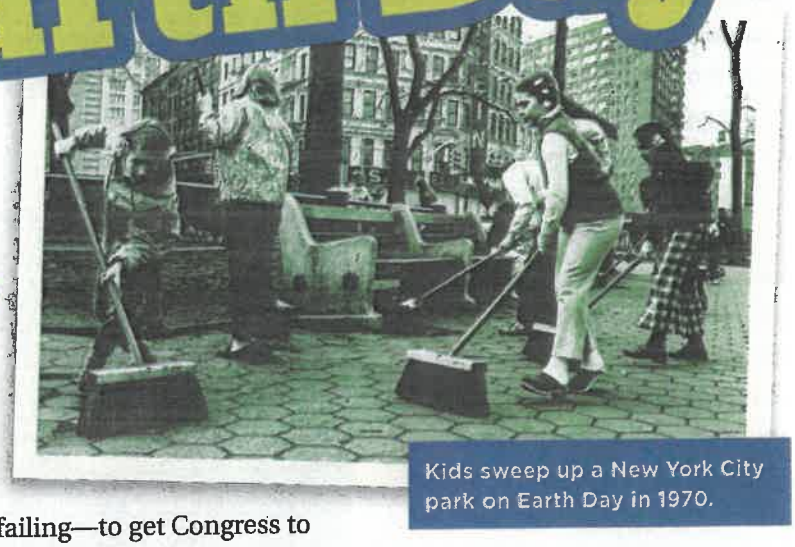
He Grew Up to Start ...

Earth Day

There had never been an event quite like it. On April 22, 1970, an estimated 20 million Americans took part in the very first Earth Day. It would never have happened if it weren't for a U.S. senator named Gaylord Nelson.

Nelson was born in the small town of Clear Lake, Wisconsin, in 1916. As a boy, he loved fishing and exploring the woods near his home. Nelson developed a lifelong appreciation for nature.

He began serving in the U.S. Senate in 1963. At the time, there were few laws to prevent the pollution of the nation's air and waterways. In his first seven years on the job, Nelson kept trying—and failing—to get Congress to take action.



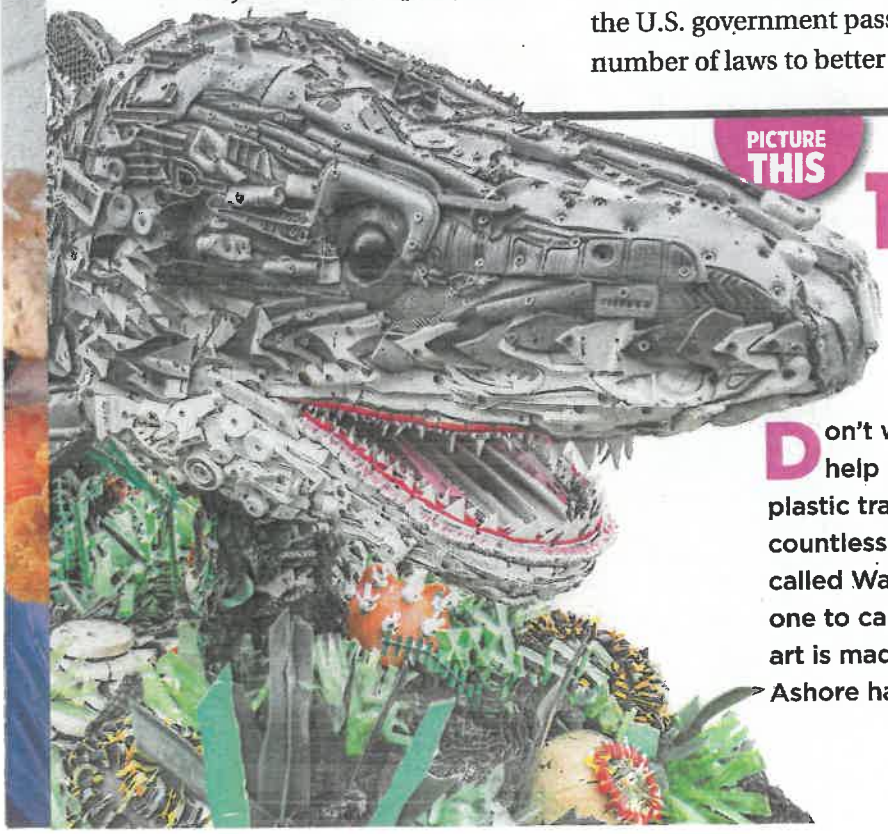
Kids sweep up a New York City park on Earth Day in 1970.

In 1969, he came up with an idea to convince the government that it needed to do more. It would be "a national day for the environment" celebrated on April 22 the following year.

Soon after the first Earth Day, the U.S. government passed a number of laws to better protect the environment. The first was the Clean Air Act, which aimed to reduce air pollution.

"Earth Day achieved what I had hoped for and then some," Nelson later said.

Nelson died in 2005, but the day he created turns 50 this year. And it has truly become an Earth-wide celebration.



PICTURE THIS

TURNING TRASH INTO ART

Don't worry—this shark won't attack. In fact, it may help save lives. Each year, millions of pounds of plastic trash ends up in the oceans. That plastic harms countless marine animals. Artists at an organization called Washed Ashore build animal sculptures like this one to call attention to ocean pollution. Each work of art is made of trash found on beaches. So far, Washed Ashore has collected more than 25 tons of trash.

DEBATE IT!

Is It OK to Swim With Manatees?

Every year, tens of thousands of people flock to Crystal River, Florida, to swim with manatees. Hundreds of the roly-poly marine mammals spend the winter there munching on sea grass. The Crystal River area is the only place in the U.S. where it's legal to swim alongside these gentle giants.

But some wildlife protection groups want swimmers to stay out of manatee territory. They argue that these once-endangered creatures migrate to Florida to survive, not to entertain us. They worry that swimmers could disturb the animals, forcing them to leave the safety of their habitat.

But others point out that Florida has strict rules, like no touching or feeding the animals. Swimmers who break those rules can be fined or even arrested.

"Manatees are amazing, and any chance to observe them is special," says Martine de Wit of the Florida Fish and Wildlife Commission. "But do so from a distance!"

Here's what two of our readers think.

GO ONLINE! See what's being done to protect manatees.

Miley Correa
California

Getting to swim with manatees is a once-in-a-lifetime opportunity. Being up close can give people a new level of respect for these animals. That could encourage them to donate money to conservation groups working to save manatees.

Wildlife officials in Florida wouldn't allow people to swim with manatees if it weren't safe. Swimmers just need to follow the rules and not disturb the animals.

Crosby Campanelli
New York

Even though manatees are gentle creatures, they're still wild animals, so we should leave them alone. People splashing and yelling might scare them away from the food they need to survive the winter.

The manatees in Florida are a threatened species, and they need to be protected. We can do our part by not invading their territory. Would you like it if a stranger showed up in your home and stared at you while you ate dinner?

WHAT DO YOU THINK? Highlight evidence to support your opinion, and then use that information to write an argument essay. You can cast your vote at scholastic.com/sn56.

NEWS REVIEW

Name: _____

INFOGRAPHIC

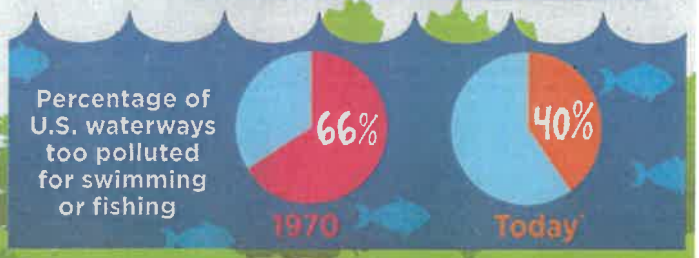
EARTH DAY: THEN AND NOW

Amount of energy produced in the U.S. from renewable sources

1970: 6% (mainly water power)

Today: 11% (mainly water and wind power)

Earth Day 1970	Earth Day Today
20 million participants in the U.S. only	**More than 1 billion** participants in 193 countries



1 Today, we recycle roughly ____ of the trash we produce.
- Ⓐ one-quarter
- Ⓑ half
- Ⓒ three-quarters
- Ⓓ all

2 Compared to 1970, we now ____.
- Ⓐ produce less trash
- Ⓑ recycle more trash
- Ⓒ use less renewable energy
- Ⓓ have more polluted waterways

WRITE ABOUT IT! Are we taking better care of the planet now than we did in 1970? Could we be doing more? Use details from this infographic to write a short essay.

Protect Our Planet! pages 2-3

1 Which event led Alexandria Villaseñor to become a climate activist?
- Ⓐ a protest at the United Nations headquarters
- Ⓑ a ride on a New York City subway
- Ⓒ a wildfire in California
- Ⓓ a meeting with other teen activists

2 Which of the following is a *fossil fuel*?
- Ⓐ smoke from wildfires
- Ⓑ greenhouse gases
- Ⓒ carbon dioxide
- Ⓓ natural gas

3 Which statement would Alexandria most likely agree with?
- Ⓐ Protesting is the only way to bring about change.
- Ⓑ We should use less renewable energy.
- Ⓒ Kids should leave it to adults to try to solve big problems.
- Ⓓ It's important to speak up about the future.

What a Waste! pages 4-5

4 What is the article mainly about?
- Ⓐ why so much food is thrown away each year
- Ⓑ how food ends up in landfills
- Ⓒ one school's plan to cut down on food waste
- Ⓓ changes to the lunch menu at an elementary school in Maryland

5 Which detail best supports the idea that throwing food away is bad for the planet?
- Ⓐ "They pack the food into coolers."
- Ⓑ "People often buy more food than they need."
- Ⓒ "When food rots in landfills, it releases methane."
- Ⓓ "Grocery stores toss damaged cans and boxes."

6 According to the article, ____ are mostly to blame for the food waste problem in the U.S.
- Ⓐ schools
- Ⓑ individual consumers
- Ⓒ farms
- Ⓓ grocery stores

David Villaseñor (Alexandria Villaseñor); Shutterstock.com (all other images)

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ScienceSpin

scholastic.com/sciencespin3-6

3-6 • April 2020

IN THIS ISSUE
Conservation

NATURAL ARMOR
Pangolins are covered in hard scales that protect them from predators.

LIFE SCIENCE

HELP FOR PANGOLINS

Can conservationists keep these cute critters from becoming extinct?

SCHOLASTIC

LIFE SCIENCE: Conservation

PROTECTING PANGOLINS

People are helping these captured animals get back to their homes in the wild.

A pangolin found in India

As night fell, Harriet Nimmo and an armed guard walked quietly through Kruger National Park in South Africa. They were protecting a small wild animal called a pangolin as it fed on ants. This shy **nocturnal** mammal is the size of a housecat. There are eight types of pangolins in Africa and Asia. They look like anteaters but are covered with protective scales. The pangolin walking with Nimmo, named Aura, was rescued from captors by police. They brought Aura to Rhino Revolution, where Nimmo worked. Nimmo is a **conservationist** who helps care for rescued wild animals. At the time, Rhino Revolution worked to save not only rhinos, but pangolins too.

Unfortunately, the scaly armor that covers Aura and all pangolins cannot protect them from **poachers**. These people

GO ONLINE!

Watch a video about pangolins at scholastic.com/sciencespin3-6

GETTING WELL: A pangolin is cared for by a veterinary nurse at Rhino Revolution, in South Africa (*right*). Experts monitor a pangolin's weight to make sure its health is improving.

traffic, or illegally trade, wildlife. Pangolins are the most trafficked mammal in the world. They are prized for their meat and scales. Millions are captured or killed each year. But conservation groups are trying to save pangolins from **extinction**.

Pangolin Protectors

Rescued pangolins have often been so neglected that they are close to dying. Veterinary nurses care for them around the clock. They give the sick animals liquid food through tubes inserted into the pangolins' stomachs. Once the pangolins regain strength, rescuers take them on walks to find ants. A pangolin eats more than 2 pounds of ants per night.

Pangolins refuse to eat in captivity, so those walks are important. "Rehabilitating them until they're healthy enough to be returned to the wild is hard," says Ray Jansen. He's a zoologist with the African Pangolin Working Group that focuses its work on saving pangolins.

Pangolins in Peril

The pangolin has unique features. It has a sticky tongue that's nearly as long as its body. It uses this tongue to slurp up ants and termites that it digs up with its strong front claws. The pangolin is the only mammal with scales instead of fur. The scales are made of keratin, the same material found in human hair and fingernails.

When threatened, pangolins curl into a ball. Their scales are a defense against predators like lions and tigers that want to eat them. But this **adaptation** makes them easy to catch. When a pangolin curls up, a poacher can simply pick it up.

All eight types of pangolin are under threat in the wild. Laws protect them. But countless pangolins are sold illegally every year. The number rescued is small, but every pangolin saved is important. "We have to treat every single one in our care as if it's the last," says Jansen.

Aura spent three months with Rhino Revolution. When she was returned to the wild, she wore a tracking device. This lets rescuers follow her movements. "We spotted her in the bush a month after her release," says Nimmo. "She looked good."

— Kimberly Y. Masibay

WORDS TO KNOW

nocturnal: active at night

conservationists: people who work to protect plants and animals

poachers: people who illegally capture or kill wildlife

extinction: the dying off of a plant or animal species

adaptation: a feature that helps a living thing survive

Name: _____

ON THE BRINK OF EXTINCTION

Nearly 2,500 kinds of animals are critically endangered. This means they face an extremely high risk of dying out in the wild. Of these, about 200 are mammals. Read on to find out about some of these mammals.

NAME: Sumatran Elephant | LOCATION: Sumatra
REASON FOR BEING ENDANGERED: Forest homes are being cut down. This is called habitat loss.
ESTIMATED NUMBER IN THE WILD: 2,500

NAME: Yangtze Finless Porpoise | LOCATION: China
REASON FOR BEING ENDANGERED: Lack of food from overfishing
ESTIMATED NUMBER IN THE WILD: 1,800

NAME: Amur Leopard | LOCATION: Russia
REASON FOR BEING ENDANGERED: Poaching as well as habitat loss due to forests being cut down
ESTIMATED NUMBER IN THE WILD: 50

QUICK QUIZ: Answer these questions using what you learned from the article and the examples (*left*).

1. Poaching means to _____ a protected animal.
   - Ⓐ eat
   - Ⓑ rescue
   - Ⓒ illegally capture or kill
   - Ⓓ adopt

2. There are _____ different types of pangolins.
   - Ⓐ two
   - Ⓑ four
   - Ⓒ eight
   - Ⓓ nine

3. The pangolin is the only mammal that is covered by _____ .
   - Ⓐ a shell
   - Ⓑ feathers
   - Ⓒ scales
   - Ⓓ whiskers

4. Why have Yangtze finless porpoises become critically endangered?
   - Ⓐ They don't have enough food because people overfish the waters where they live.
   - Ⓑ People hunt them.
   - Ⓒ People catch them to make them pets.
   - Ⓓ all of the above

5. Which of the following is the best definition of habitat loss?
   - Ⓐ removal of an animal from its home
   - Ⓑ destruction of an area in which a type of animal lives
   - Ⓒ when animals from outside a habitat invade a new habitat
   - Ⓓ none of the above

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