

LESSON | PLANT GROWTH AND WATER

Go deeper
with our
digital tool on
plant life cycles:
scholastic.com
/growingstrong.

Pair nonfiction reading and hands-on experiments to solidify your students' knowledge of plant life cycles.

Objective

Students will analyze text about plant growth, then conduct an investigation about the water needs of different plants.

Standards

NGSS

3-LS1-1. Investigate and visually represent life cycles

4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival

5-LS1-1. Visually represent understanding of needs to grow and thrive

CCSS ELA

RI.3-5.2 Determine the main idea of a text

Time

45 minutes

5–10 minutes for follow-up of experiment for 4–5 days

Materials

- Two or more plants in pots
- How Plants Grow...and Help You Grow! activity sheet
- Fun Fruit Facts! classroom poster
- What Do You and Plants Need to Grow? activity sheet
- Venn diagram template (scholastic.com/growingstrong)

1 Start by asking: *What things do you need to be healthy that a plant also needs?* (Possible answers: I drink water and plants need water, we both need fresh air, etc.)

2 Have students read and complete the summarizing activity on the How Plants Grow...and Help You Grow! activity sheet. Share learnings as a class. Emphasize that plants need sunlight and water (air, too!).

3 Introduce a research question: *What happens if the amount of water you give a plant changes? How can we find out more?* Pair up students to brainstorm ideas. Explain that the class will develop an experiment in which they will give plants varying amounts of water each day (including not watering the plants at all), and then record how each plant reacts. Note: You can use two or three small potted plants in your classroom or plants outside on your school grounds.

4 Have students create a log booklet by folding a few pieces of paper in half. Explain that each day, they'll record the amount of water given to each plant and draw a small sketch of what the plant looks like.

Using color will be helpful to show any changes in leaf/flower color.

To increase the challenge: Have students draw predictions at the beginning of the booklet.

To decrease the challenge: Make a class chart and have students take turns filling in the daily observations.

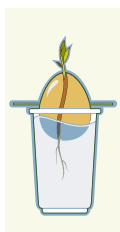
5 Show the Fun Fruit Facts! poster to launch a discussion about what plants need to survive (e.g., seeds, particular climate needs) and what humans need to survive (e.g., healthy food like avocados, digestive system to extract nutrients). Have students complete the Venn diagram with the What Do You and Plants Need to Grow? activity sheet. Collect a list on the board of healthy choices students can make, such as eating plant-based foods like avocados, bananas, and apples.

6 After a week, have students draw conclusions about the water experiment. Ask: *What happened to each plant when you gave it various amounts of water, or none? How did different plants react to the same amount of water?* Have them write conclusions in their booklets.

Plant Project Grow an Avocado Plant

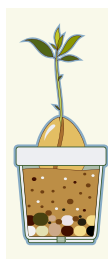
1

Place three toothpicks into the sides of a dried avocado pit. Prop it in a full glass of water.



2

Wait for roots and a sprout to appear (2–6 weeks). Invite students to help plant the seed in a pot filled with soil.



3

Set in a sunny spot, water regularly, and watch it grow!



Name _____

How Plants Grow...and Help You Grow!

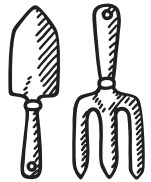
Read the paragraphs below and underline important information. Then write a short summary (about two sentences) of each paragraph on separate paper.

All plants have a life cycle. A seed starts out in the ground. Add water and sunlight, and it will start to grow. As the plant sends roots into the ground, its stem and leaves climb toward the sky. As it grows, it also makes seeds. These seeds can fall to the ground. Seeds can also travel in the wind and on animals. Animal droppings take seeds far and wide. This means the plant can grow again.



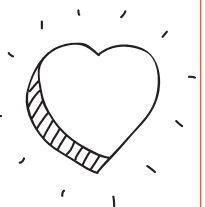
All plants need sunlight and water. But different plants can have different needs. For example, avocados need warm weather to grow. So almost all the avocados we eat in the U.S. come from Mexico, where the weather is warm all year. Plants like apple and peach trees can survive cold winters, so they grow as far north as Canada.

Plants feed themselves. A plant's stem is like a straw that sucks up water from the ground. The water goes to the leaves. Then the leaves make food for the plant using sunlight, water, and air. Unlike plants, animals can't make their own food. So, many animals eat plants to get the energy the plant produced in its leaves.



Some plants need help to grow fruit. When you plant seeds from fruits like blueberries and bananas, you can grow fruit. The seeds from other fruits, like avocados and apples, may not give you fruit if you plant them. Farmers use a process called grafting to help these trees produce fruit.

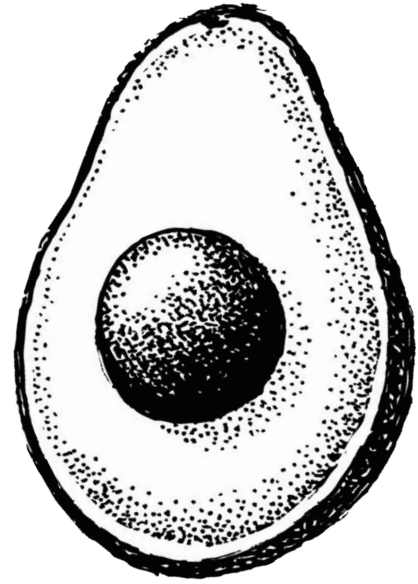
Fruits and vegetables contain important nutrients. Eating them helps your body grow strong and healthy. For example, avocados have nearly 20 nutrients, including vitamins, minerals, fiber, and good fats. Your body needs these nutrients to work properly.



Name _____

What Do You and **Plants** **Need to Grow?**

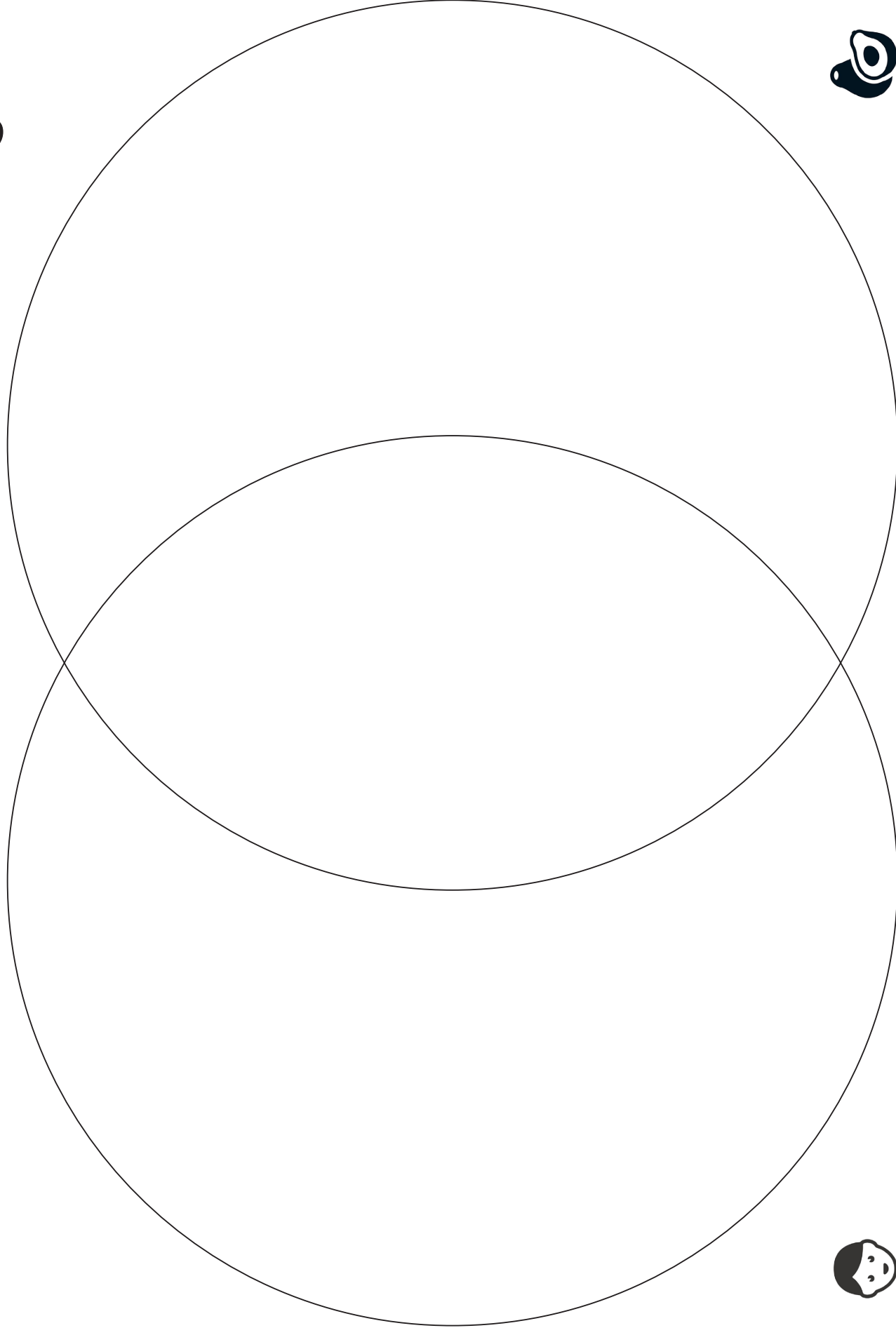
Plants and people need some of the same things to grow. But people are more complicated! Review what you learned about avocados and other fruits. Then cut out these words and make a Venn diagram to compare which needs you share with plants and which ones you don't.



Skin	Home	Sun
Love	Air	Seed
Friendship	Water	Warmth
Soil	Education	Roots

Name _____

Venn Diagram



LESSON | DELICIOUS STORY ELEMENTS

Dive into a creative activity about healthy eating and smart storytelling.

Objective

Students will read and reflect on healthy eating choices while identifying story elements and aspects of author's craft, then applying them to writing their own story.

Time

20 minutes plus reading time and writing time

Standards

CCSS ELA

RL.3.3 Describe characters and how they contribute to events
RL.4.3 Describe characters, setting, and events using details
RL.5.1 Quote from a text to explain it and draw inferences
W.3-5.3 Write narratives with effective technique and details
W.3-5.3.A Orient the reader by establishing a situation, characters, and event sequence

Materials

- A Party for Aunt Lucia activity sheet
 - Reading Passage A (basic)
 - Reading Passage B (more challenging)
- Avocados Are Awesome family page

1 Ask: *Who likes to celebrate with family? What kinds of foods do you eat?* Have students turn and talk, and then share the special foods and traditions in their families.

2 Encourage the idea that healthy foods can be delicious, and that trying a new dish could mean we find a favorite food. Be sure to welcome all family traditions and foods.

3 Divide the class into groups. Hand out reading passages, matching students with the appropriate leveled passage. Proceed with echo reading, choral reading, and/or partner reading.

4 Have students share what they learned about healthy choices. Ask: *How did the author organize the story to share the information in a clear way?* Tell students they will be detectives to figure out the author's strategies. Ask them to point out different story elements as you write them in a word bank (e.g., characters, setting, problem, solution).

5 Ask students to pair up to discuss how the author made each story element clear to the reader. For example, the author included the relationships of each character—brother, parents, aunt. Have students annotate or take notes on the story elements or strategies as they discuss.

For younger students: Ask what detail the author included to set the scene for a party setting and make it feel more real ("Streamers cascaded from the ceiling..."). Remind students that "showing" is usually more powerful than "telling" in story writing.

For older students: Challenge them to find an example of "showing," not "telling." For example, rather than saying "An avocado looks like _____," the author went right into showing details ("Soft, green flesh surrounded a pit...").

For English language learners: Draw representative visual symbols next to each story element in the word bank. Connect the story elements to a favorite book the class has read.

6 Prompt students to write a sequel to the story, or write their own tale about a festive family event they imagine or have experienced. Encourage them to imagine adding a healthy food, or showcasing one their family already eats. Challenge them to use the story they read as a model for:

- introducing characters by noting their connections to one another (can be beyond family)
- including details that help the reader picture the setting and make it feel real
- including a problem and solution

For older students: using the plot to communicate a message, such as the importance of healthy eating

7 Have students outline a story with these elements, then begin writing. When they revise, direct them to amp up or clarify these details.

8 Celebrate and share student work. Send home the family page to continue the learning at home.

Name _____

A Party for Aunt Lucia

Streamers cascaded from the ceiling. Matilda, her brother Luis, and their parents were having a party. Their Aunt Lucia was graduating as a nutritionist. Even though the party was in her honor, they hoped she would bring something tasty.

The doorbell rang. Matilda raced to open the door. Aunt Lucia stood there beaming. She was still wearing her cap and gown. She had a large bag in her hand.

Luis and Matilda's dad hugged Aunt Lucia. "I was just running out! I forgot the dip!" he said, laughing.

"I came prepared," Aunt Lucia said. She winked. "I brought a few fruits to make a dip with the kids."

They all went to the kitchen. It was full of mouthwatering smells, and steaming dishes adorned every surface.

"This looks amazing!" Aunt Lucia said. "And it looks like I brought the perfect addition." A bowl of chips sat on the counter next to an empty bowl.

Aunt Lucia pulled out peaches, plums, and something green and unusually bumpy from her bag.

"What is that? Is that fruit?" Luis asked.

"It is!" Aunt Lucia said. "It's an avocado." She slid a knife into the fruit. She gently twisted the two sides and it came apart.

Soft, green flesh surrounded a pit on one side. On the other side, there was a perfect half circle where the round, smooth, brown pit had been.

"It's green inside!" Matilda said. Just then, her stomach complained noisily; everyone laughed. Aunt Lucia quickly sliced the peaches and plums in half. Their sweet aroma wafted up and juice dripped into the bowl.

Aunt Lucia showed Matilda and Luis how to chop the peaches, plums, and avocado into little cubes.

They tossed all the fruit together and mixed in olive oil and vinegar. Aunt Lucia let them each try a chip dipped in the sweet and sour snack. It was delicious!

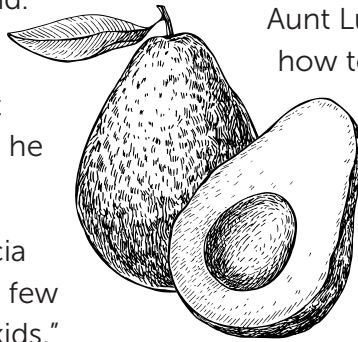
"And it has naturally good fats and vitamins, too," Aunt Lucia said.

"Fat? I thought that was bad for you," Luis said.

"Not all fats. Some are good for you and your body needs them. Avocados have these good fats. These fats even help your body absorb vitamins in the peaches and plums. When you pick fruit, try to eat the rainbow. The more colors, the better!"

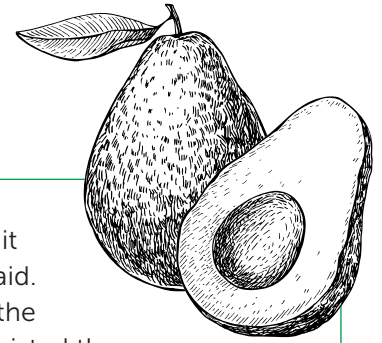
"You're an expert on healthy foods now," said Luis and Matilda's mom.

Then the doorbell rang again. More guests! It was time to celebrate.



Name _____

A Party for Aunt Lucia



Streamers adorned the ceiling. Matilda, her brother Luis, and their parents were having a party. Their beloved Aunt Lucia was graduating as a nutritionist.

The doorbell rang; Matilda raced to open the door. Aunt Lucia stood there beaming, still wearing her cap and gown. She had a large tote bag in her hand. Matilda and Luis's parents hugged her.

"Come in, but we have to run out," they said, laughing. "We don't have any dip. I can't believe we forgot it!"

"Serendipity! I have a solution. I brought some of my favorite fruit, and it makes a great dip," Aunt Lucia said.

Matilda and Luis's parents exhaled. They all went to the kitchen. It was full of wonderful tempting smells, and steaming dishes adorned every surface.

"This looks amazing, but I think I brought the perfect addition," Aunt Lucia said. "Because most of the dishes look salty and sugary, and there aren't many colorful fruits."

"But this is what we always eat," said Matilda.

"I know, but at school I learned that you should include a variety of different-colored fruits in your diet every day," Aunt Lucia said. "Fruits contain important nutrients like vitamins, minerals, and fiber. These nutrients keep your body strong and healthy. And as a surprise, I brought some colorful fruits today!"

Aunt Lucia opened her bag and pulled out furry peaches, smooth plums, and something mysteriously green and bumpy.

"What an unusual-looking... Is that really a fruit?" Luis asked.

"It's an avocado and it is a fruit," Aunt Lucia said. She slid her knife into the avocado. She gently twisted the two sides and it came apart. Soft, green flesh surrounded a pit on one side. On the other side, there was a perfect half circle where the round, brown pit had been.

Just then, Matilda's stomach rumbled and everyone laughed. Aunt Lucia used the same sharp knife to cut up the peaches and plums. Split open, they smelled sweet and dripped juice into the bowl.

She showed the kids how to chop the orange-red peaches, aubergine plums, and bright green avocado into small cubes. They combined the fruit together with a dash of olive oil and vinegar. Aunt Lucia encouraged them to sample a chip dipped in the sweet and savory snack. Their taste buds cheered!

"Yum!" Aunt Lucia said. "And it has vitamins and naturally good fats, too!"

"I thought fat was bad for you," Matilda said.

"Some fats are good for you and your body needs them. Avocados contain a specific fat your body requires. Avocados can act as a 'nutrient booster' by helping your body to absorb vitamins A, D, K, and E from foods that are eaten with them. When you pick fruit, always try to eat the rainbow."

"Wow, you're an expert now," Matilda and Luis's mom said proudly.

Then the doorbell rang again and again, and guests poured in. It was time to celebrate!

AVOCADOS

Are Awesome

At school, your child has been learning about how fruit trees and plants grow through the **Growing Strong** program from **Scholastic** and **Avocados From Mexico®**. Extend the learning by doing a cool family science experiment—and follow these tips to get the most out of avocados at home!

IS IT RIPE YET?

Some fruits, like avocados, continue to ripen after they're picked. Here's how to tell if your avocado is ready to slice and enjoy.



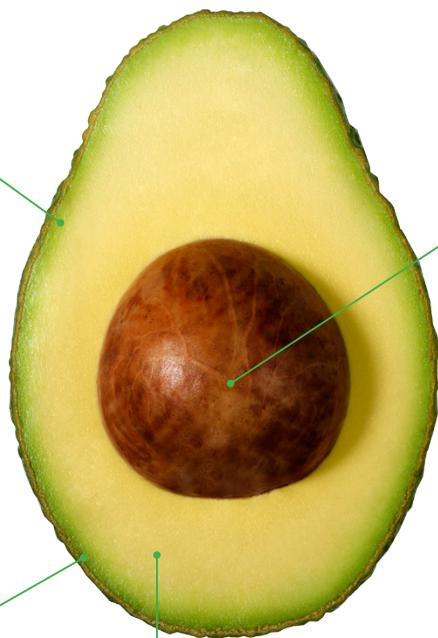
PRESS THE FLESH

If it yields to gentle pressure and the skin is dark green, it's ready to eat now.



RIPEN IT RIGHT

If it's not ripe yet, let it sit for a few days until the skin is dark green or black.



SLICE LIKE A PRO

Slice it lengthwise around the pit, twist to separate the halves, then scoop out the pit with a spoon.



SAVE SOME FOR LATER

To keep a leftover half from getting brown, sprinkle it with lemon juice, then wrap tightly with plastic wrap.

To learn more about avocados, find nutritional information, as well as discover cool recipes, visit avocadosfrommexico.com.



Fun With Science!

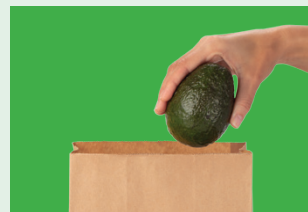
Have your child ripen three avocados using three different techniques, then make observations each day.

Which one will get ripe first?

1. On the countertop



2. In a paper bag by itself



3. In a paper bag with an apple or a banana



Los AGUACATES son geniales

En la escuela, tu hijo ha estado aprendiendo sobre cómo crecen los árboles y las plantas frutales a través del programa **Crecer fuertes (Growing Strong)** de **Scholastic** y **Avocados From Mexico**®. Apoya el aprendizaje de tu hijo con un fantástico experimento en familia, ¡y tengan en cuenta los siguientes consejos para aprovechar al máximo los aguacates en casa!

¿YA ESTÁ MADURO?

Algunos frutos, como el aguacate, continúan madurando luego de haber sido cosechados. Aquí les contamos cómo saber si un aguacate está listo para que lo corten y lo disfruten.



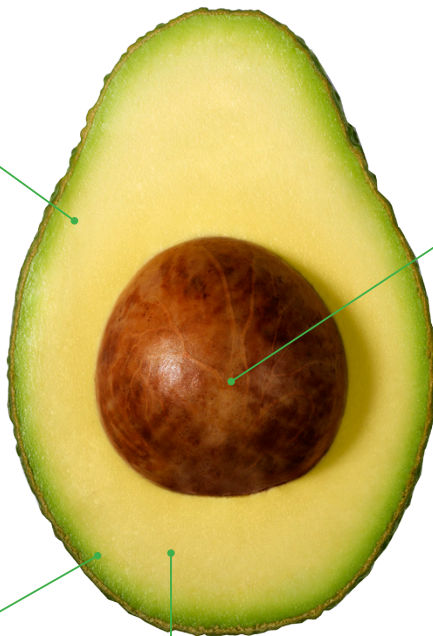
PRESIONEN LA PULPA

Si se hunde al hacer una suave presión y la cáscara es verde oscuro, el aguacate ya está listo para que lo coman.



ESPEREN A QUE MADURE BIEN

Si aún no está maduro, déjenlo unos días más hasta que la cáscara tome un color verde oscuro o negro.



CÓRTENLO COMO EXPERTOS

Córtelo a lo largo por el centro, gírenlo para separar las mitades y luego quiten la semilla con una cuchara.



GUARDEN UN POCO PARA DESPUÉS

Para guardar una mitad y evitar que se ponga negra, rocíenla con jugo de limón y envuélvanla con papel plástico de cocina bien apretado.

Para obtener más información sobre los aguacates, encontrar información sobre nutrición y descubrir recetas fantásticas, visiten avocadosfrommexico.com.



¡Ciencia y diversión!

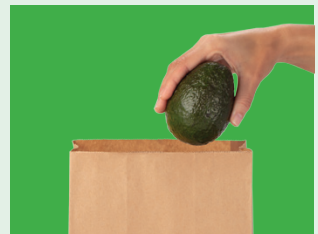
Haz que tu hijo ponga a madurar tres aguacates con tres técnicas diferentes. Luego, hagan observaciones cada día.

¿Cuál madurará primero?

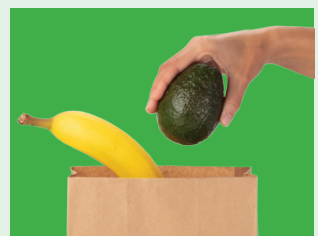
1. En la mesa de la cocina.



2. En una bolsa de papel.



3. En una bolsa de papel con una manzana o una banana.

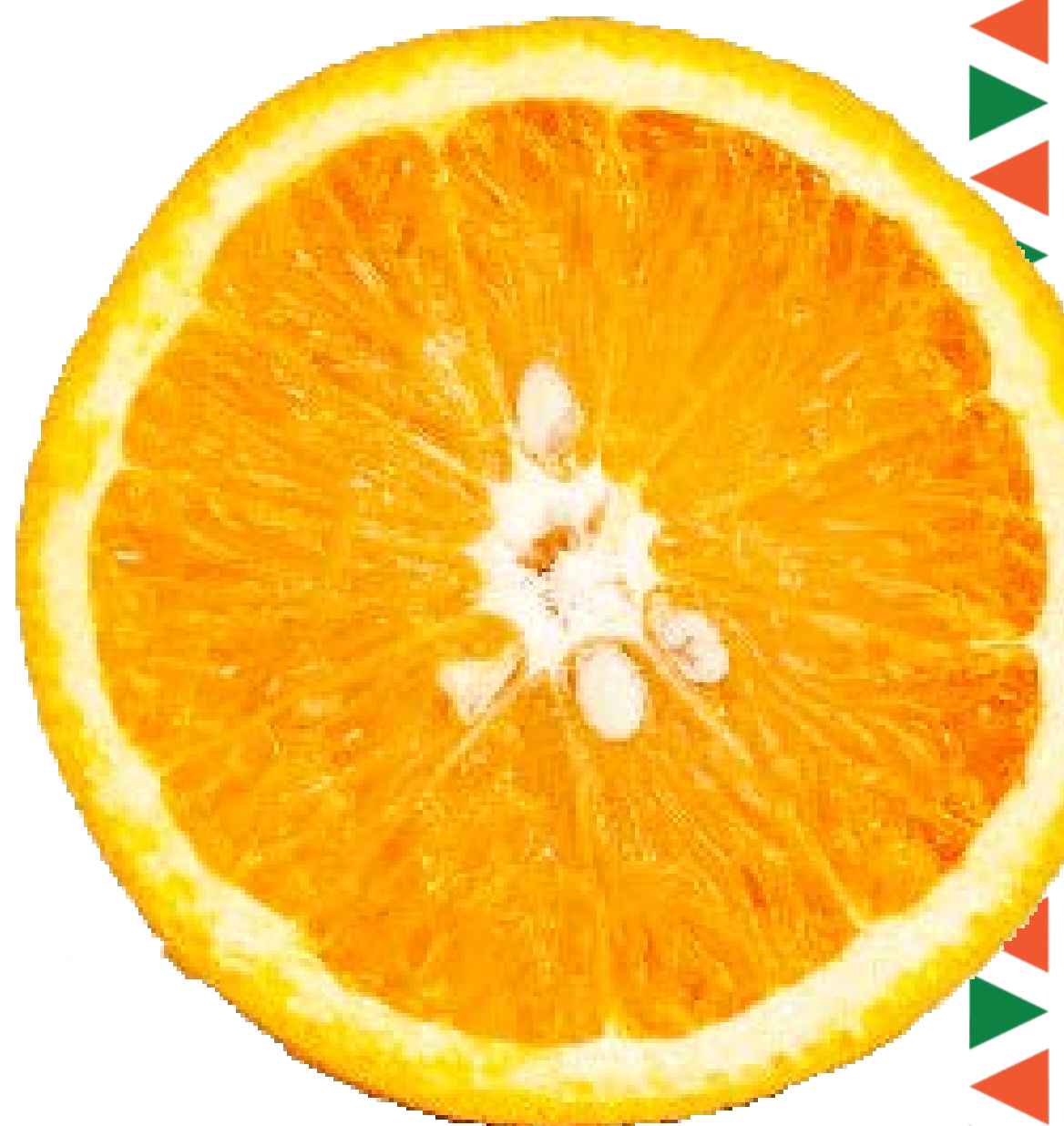


FUN FRUIT FACTS!



GROWING

Some fruits need a warm climate to grow. About 85 percent of **avocados** eaten in the U.S. are grown in Mexico, where it's warm all year. Other fruits, like **apples**, grow best in cooler climates.



YUM!

Fruits contain **nutrients** that are good for animals, including humans like you! The inside of fruits, like avocados, taste **yummy** to attract animals to eat them and move their seeds to new places to grow.



SEEDS

The seeds can be on the **inside** or the **outside**. Some fruits, like avocados, have only one seed. Others, like strawberries, have many.



It's amazing how different fruits can look from one another while still having parts in common: **seeds**, **skin**, and **edible flesh**!

Avocados from Mexico

◆◆ ALWAYS IN SEASON ◆◆

LESSON | NARRATIVE MAIN IDEAS

Help students build reading comprehension skills with a fun story about shopping for fruit!

Objective

Students will identify the main idea of a story and use key details to answer comprehension questions.

Standards

Common Core ELA

Grade 3

RL 3.2 Recount main idea using key details

Grade 4

RL 4.1 Use text examples to draw inferences

RL 4.2 Summarize a story

Grade 5

RL 5.1 Use specific text details to draw inferences

RL 5.2 Summarize a story

SEL

Interpersonal skills

Healthy decision making

Time

45 minutes

Materials

- A Trip to the Grocery Store reading passage
 - Version A (basic)
 - Version B (more challenging)
- Show What You Know activity sheet
 - Version A (basic)
 - Version B (more challenging)

1 Have students work in pairs to come up with a list of fruits and vegetables in every color of the rainbow. Invite students to share their favorites.

2 Remind students of the reading passage A Party for Aunt Lucia (from the **Delicious Story Elements** lesson). If they haven't read it, introduce today's new passage by telling the students that Matilda and Luis helped to prepare a delicious new dip for their aunt's graduation party. Ask students to predict what they think will happen when the dip runs out.

3 Hand out A Trip to the Grocery Store reading passages, matching students with the appropriate leveled passage. Proceed with echo reading, choral reading, and/or partner reading.

4 Discuss the passage as a class. Ask: *What was this story mostly about?* Tell students this is called the main idea. *How did they know it was the main*

idea? Have them turn and talk to find two or three places (key details in the text) that helped them figure out what the story was about. Review as a class.

5 Hand out the Show What You Know activity sheet, matching students with the appropriate leveled comprehension questions. Discuss answers as a class. Wrap up by directing students to write a quick reflection of something they will do differently at the store next time they go. Possible examples: looking at the different vegetables, checking a nutrition label, bringing reusable bags to avoid plastic, noticing if they're blocking someone's way and moving, if possible, etc.

Vocabulary Support

[Activity sheet A] *Produce* (noun): fruits and vegetables; or food that has been grown, usually from farming
[Activity sheet B] *Dice* (verb): to chop up food into small cubes, like the shape of rolling dice

Science Inquiry Which Way Is Best to Ripen?

Leave out three avocados in the classroom: one on a table, one in a paper bag alone, and one in a paper bag with a banana. Instruct students to fold a sheet of paper into fourths. In the first box, have them write a prediction about which avocado they think will ripen first and why. Check daily for firmness, then have students make a color sketch of what they see on the remaining squares of their folded paper. After three days, determine which ripened the fastest.

1. On a classroom table



2. In a paper bag by itself



3. In a paper bag with a banana



TAKE IT FURTHER Cut open the avocado to explore all its parts: seed, flesh, and skin!

Name _____

A Trip to the Grocery Store

Luis and Matilda were having fun at Aunt Lucia's graduation party. They noticed the bowl with the avocado, plum, and peach dip was empty.

"Can we make more?" Luis asked.

"All the fruit is gone," Matilda said.

"Let's take a trip!" their dad exclaimed.

They rode their bikes to the grocery store and found the produce section. The fruits and vegetables were stacked in colorful piles.

"Wait a minute!" None of the fruit had labels on them like Matilda's cereal box did. "How do we know what's in them and if they're good for us?" she asked.

"That's the great thing about the produce section—it's all fresh and good for you," said Dad. "Do you feel that? It's colder in this part of the store because cool air helps keep food fresh."

Dad led them to a mountain of avocados. Matilda and Luis each picked one up.

"This one is really hard," Matilda said.

"This one is really soft," Luis said.

Just then a woman in a blue shirt walked up to the display.

"Hmmm," she said.

"Do you need help choosing a ripe one?" Dad asked.

"Yes, please," she said with a smile.

"I grew up in a part of Mexico, where the weather is always warm, so we had lots of avocado trees," Dad said. "I was just about to show my kids how to pick one. I'll show you too."

Dad pointed to the avocados. "Look for one with dark green to almost black skin, then gently squeeze it," he said.

"If your finger goes down just a bit, it's ready right now. If it feels very soft, it's too ripe. And if it's too hard, it's not ready, but you can always let it sit on the counter for a few days until it ripens."

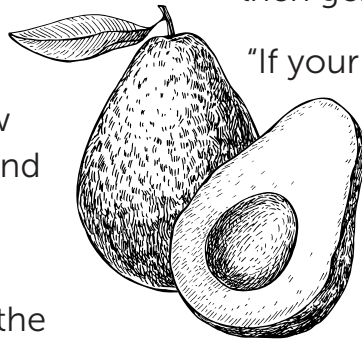
"This one is perfect! Thanks for your help!" the woman said with a smile.

Luis, Matilda, and Dad filled their reusable produce bags with ripe avocados, plums, and peaches.

When they got home, everyone gathered in the kitchen to chop and slice the fruit. Then Matilda and Luis mixed up a fresh bowl of dip.

"It's delicious!" Aunt Lucia exclaimed.

"Thank you both!"



Name _____

A Trip to the Grocery Store

Aunt Lucia's graduation party was packed with family, friends, and delicious foods. Aunt Lucia reached for the bowl of dip, but it was empty. Matilda and Luis grinned guiltily.

"It's all gone," Luis said with a shrug.

"We can fix that!" their dad chimed in. "Grab your bikes."

They strapped on helmets, rode to the local grocery store, and headed straight to the produce section. The fruits and vegetables were balanced in colorful piles. Matilda picked up an orange. She noticed it didn't have a nutrition facts label like the one on her cereal box.

"How do we know what's in this or if it's good for us?" she asked.

"Produce doesn't need a label. It's all fresh and good for you," Dad said.

"That's why it's colder in this part of the store. Cool air helps keep food fresh."

Everything they passed was tempting: shiny apples, tomatoes on vines, and big heads of lettuce. When they found a tall pyramid of avocados, they each picked one up.

"This one is really hard," Matilda said.

"This one is really soft," Luis said.

Just then, a woman walked up to the display. "Hmmm," she said as she looked at the avocados.

"Do you need help choosing a ripe one?" Dad asked.

The woman smiled. "Yes, please! I'm never sure which ones are ready."

"I grew up in a part of Mexico, where the weather is always warm, so we had lots of avocado trees. I was just about to show my kids how to pick one. I'll show you too," said Dad.

"First, look for one with dark green, almost black skin. Then gently squeeze it. If your finger goes down just a bit, it's ready

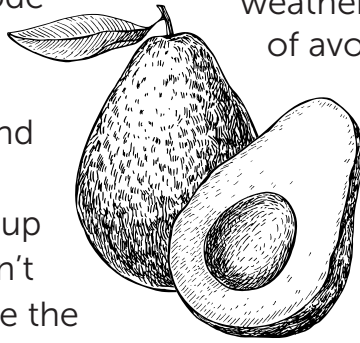
right now. If it's very soft, it's too ripe. And if it's too hard, it's not ready, but you can always let it sit on the counter for a few days until it ripens and softens."

"Oh wow, thanks so much for your help!" the woman said.

Dad, Luis, and Matilda filled their reusable produce bags with avocados, plums, and peaches. When they got home, everyone helped chop, slice, and dice the fruit.

"We dedicate this snack to Aunt Lucia!" Matilda cried.

"We love you!" everyone else shouted.



Name _____

Show What **You Know**

Answer the questions about Luis and Matilda's shopping trip. Use complete sentences and details from the text.

1. Why do Matilda and Luis go to the store?

2. Put a box around the word **produce** in the story. What does it mean? Circle the words around **produce** that helped you figure it out.

3. Find the paragraph that explains how to choose a ripe avocado and underline the verbs. What can you do if an avocado isn't ripe?

4. How did Luis and Matilda's dad treat the woman in the grocery store? What did that teach them?

5. What did Luis and Matilda do to help the environment while they were at the store?

6. What is the main idea of this story? How do you know? Underline key details in the story that give you clues.



Name _____

Show What **You Know**

Analyze what you've learned on your trip to the store with Matilda and Luis. Explain your thinking using complete sentences and evidence from the text.

1. Identify two polite things that the characters did at the grocery store.

2. How do you choose a ripe avocado? Summarize it in your own words.

3. What could **dice** mean in the last paragraph? Circle the words that give you a clue.

4. What two things did Luis and Matilda do to help the environment?

5. What is the main idea of this story? Underline three places in the story that help you defend your answer.

THINK ABOUT IT! What information in this story can you apply to your own life?



LESSON | UNDERSTANDING BIOMES

Help students explore biodiversity and plant science via engaging classroom stations.



Objective

Students will describe and defend why some plants thrive and others can't survive in different biomes.

Standards

NGSS

3-LS4-3 Construct an argument about organism survival in particular habitats

C3

D2.Geo.2.3-5 Use maps to gather data about environments and habitats

D2.Geo.10.3-5 Explain why different world regions support different plant life

Time

60 minutes including three group work sessions and a whole group share

Materials

- Their Perfect Homes reading passage
- What Helps Plants Grow? activity sheet
- 2 pieces white 8 x 11 paper per student to make mini-book
- Short video summarizing Earth's biomes: bit.ly/studyjambioes
- How Do They Grow? digital tool: scholastic.com/growingstrong/howdotheygrow



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1 Display photos of a few biomes (such as desert, tundra, and taiga) or even photos of your local ecosystem. Ask students what differences they observe and what types of plants they see.

2 Direct students to turn, talk, and share about what plants grow in their community. Why do they think those plants grow there? What conditions impact plant success in an area?

3 Explain that scientists call large areas of a similar climate and plants a **biome**. (Alternately: If you'd like to connect this lesson to an existing ecosystem or plant cycle lesson, skip to step 6). Tell the class that today they are going to explore their biome and others to see which plants can survive and thrive in different conditions. Explain that there are six biomes: grasslands, deciduous forest, taiga, tundra, rainforest, and desert.

4 Create biome books by folding two pieces of paper in half to make 8 pages. Have students:

- label the cover: Biomes
- label each of the six inside pages with a different biome

To increase the challenge: Have students use the back cover (page 8) to compare and contrast biomes.

5 Watch the biomes video together.

a. Before watching: Ask students to look especially for what kinds of plants can grow in each biome, as well as features such as amount of rain, temperature, etc. Use avocados as an example: Avocados need warm temperatures year-round, plenty of rain, and rich soil.

b. Watch video. Pause after each biome to allow students to write down new learning.

6 Hand out Their Perfect Homes reading passage and What Helps Plants Grow? activity sheet. Have students read the nonfiction text about fruits and plants that grow in North America, then answer reading comprehension questions and make inferences. Review answers as a class.

7 Wrap up by circling back to the plants students identified in their communities in step 2. Ask: *Is there anything else you want to add to your observations and inferences about the connections between local plants and local biome conditions?*



Their **Perfect** Homes

Plants need specific conditions to survive well. Read about North American fruits and learn what makes them grow successfully.

Nutrients

Something that is needed by people, animals, and plants to stay strong and healthy. Proteins, minerals, and vitamins are all nutrients.

All plants need sunshine, water, soil, and certain temperatures to grow. But different plants need different combinations of these things. For example, watermelons need lots of water—but too much water can make the fruit split open! Blueberry bushes thrive in climates with cold winters and mild summers, like in Michigan. Apple trees need to live where there are seasons, like in New York, so the tree can grow new fruit each year.

Avocado trees also have unique needs. Each tree starts out as a round, brown seed. The seeds love the rich volcanic soil of Mexico. This soil is rich in **nutrients** that help avocado trees grow. Avocados need bees to help them **pollinate** their flowers. If the flowers are pollinated, they grow into avocados. If there is too much rain, bees will stay away. If there is too little rain, the trees can't grow. With just the right amount of rain and warm temperatures, avocados grow in Mexico all year long.

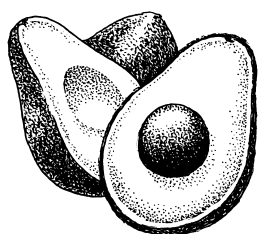
Parts of North America are desert, like in Arizona. Plants like the cactus have traits to help it **thrive** without much water. In fact, if a cactus gets too much water, its root will rot and it will die.

Pollinate

To carry or transfer pollen (tiny grains produced in flowers), either within a flower or to another flower, in order to produce seeds.

Thrive

Survive well.



Find out more about avocados, watermelons, blueberries, and strawberries—and help them grow!

[scholastic.com/howdotheygrow](https://www.scholastic.com/howdotheygrow)

Name _____

What Helps **Plants Grow?**

Read the article "Their Perfect Homes." Then answer the questions using facts and complete sentences.

1. What do all plants need to grow?

2. Why do avocados grow well in Mexico?

3. Why are bees important?

4. Why is the right amount of rain important to plants? Give two examples of too much rain hurting plants.

5. If you planted a cactus where an avocado was growing well, what would probably happen to the cactus? Why?

6. A farmer planted avocado and watermelon near each other and found they are growing well. Why do you think that is? Be specific.

