

Unit 3

Unit at a Glance

- ▶ **Language Focus:** Give Information, Define and Explain
- ▶ **Reading Strategy:** Make Inferences
- ▶ **Phonics Focus:** Review: Two- and Three-Letter Blends; Plurals: -s, -es, -ies
- ▶ **Topic:** Plants

Life in the Soil

?
BIG
Question

What is so amazing about plants?

SICHUAN, CHINA
A woman transplanting rice in a paddy field in Jiuchi Town

Share What You Know

- 1 **Think** of the most amazing plant you know. Draw it.
- 2 **Display** all the class drawings. Don't tell which is yours!
- 3 **Say** an amazing thing your plant does. Can your class guess which plant is yours?



Do It!

My plant grows without much water.



Give Information

Listen to Marco's song. Then use **Language Frames** to give information about a plant you know.

Language Frames

- Its _____ is _____.
- Its _____ are _____.
- It has _____.



Song  

My Big, Strong Plant

A big, strong plant lives in my yard.
Its stem is thick and wide.
Its leaves are nearly two feet long.
I'm glad it lives outside!

Chorus:

My big, strong plant!
It grows against my wall.
It has flowers in the summer
And seed pods in the fall.

Tune: "Oh! Susanna"

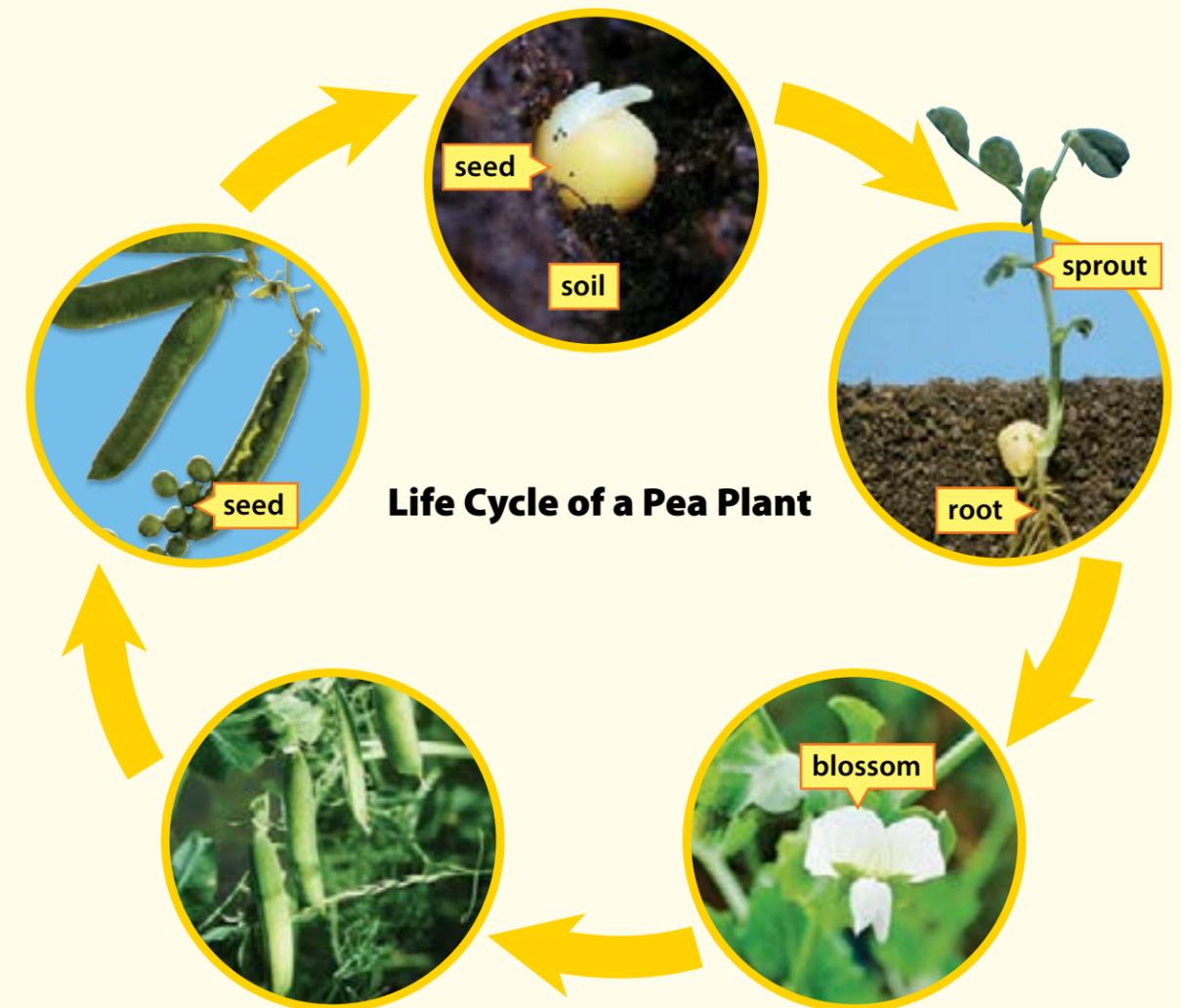


Key Words

Look at this diagram. Use **Key Words** and other words to talk about the life **cycle** of a pea plant.

Key Words

blossom
cycle
root
seed
soil
sprout



Talk Together

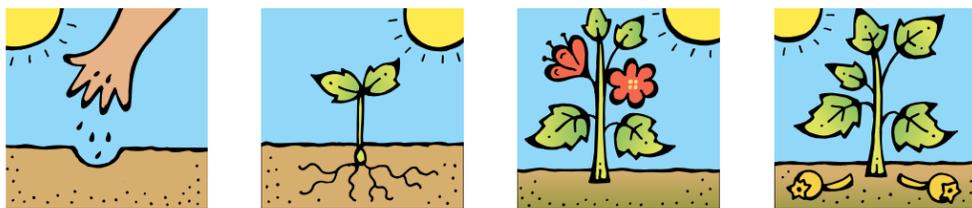
What is amazing about a pea plant's life cycle? Use **Language Frames** from page 152 and **Key Words** to give information to a partner.

Sequence

When things happen in a certain order, they are in **sequence**. When you talk about sequence, you can use:

- time-order words: *first, next, then, finally*
- names of days, months, seasons: *Monday, May, summer*

Look at the pictures of a growing plant.

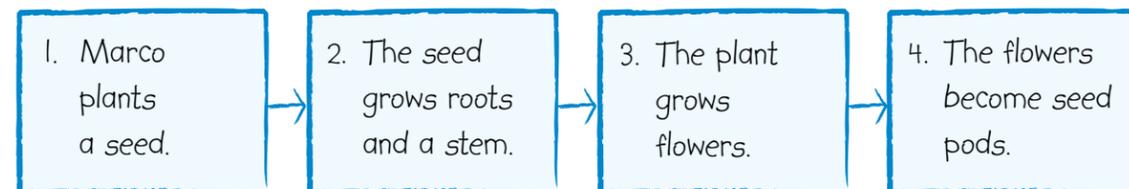


Map and Talk

You can use a sequence chain to show when events happen. Here's how you make one.

Each event goes in a box in the sequence chain. The first event goes in the first box. The second event goes in the second box, and so on.

Sequence Chain



Talk Together

Tell your partner the steps of a plant's life cycle. Your partner makes a sequence chain.

More Key Words

Use these words to talk about "Hoa's Little Garden" and "Gifts from the Earth."

characteristic

noun



A **characteristic** is how something looks or what something does. A **characteristic** of this plant is white flowers.

conditions

noun



When **conditions** are right, good things happen. Clear skies and wind are good **conditions** for sailing.

depend

verb



To **depend** means to need something or someone for support. A baby **depends** on its mother.

growth

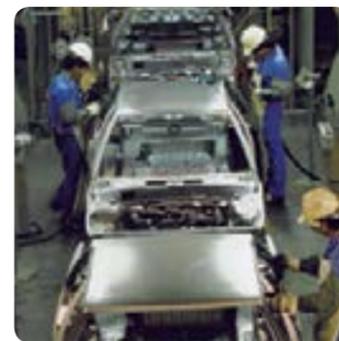
noun



The **growth** of something is how much bigger it gets.

produce

verb



To **produce** means to make something. This factory **produces** cars.

Talk Together

Use a **Key Word** to ask a question. A partner uses a **Key Word** to answer.

What is a characteristic of some plants?

Some plants produce fruit.

Learn to Make Inferences

Look at the picture. The text does not say how Marco and his mom feel. Look at their expressions to figure out, or **make an inference** about, their feelings.



When you read, you have to **make inferences**, too.

How to Make Inferences

-  Look for details in the text.

I read _____.
-  Think about what you already know about the details and the topic.

I know _____.
-  Put your ideas together. What else can you figure out about the details?

And so _____.

Language Frames

-  I read _____.
-  I know _____.
-  And so _____.

Talk Together

Read Marco's "Gardener's Journal." Read the sample inference. Then use **Language Frames** to make inferences. Tell a partner about them.

Journal

Gardener's Journal

- June 15: I love my big plant! I water it every day. It is in a sunny place, so it has all the right **conditions** to grow.
- June 20: My plant bloomed today! The **blossoms** are bright orange. The color is a **characteristic** of this plant. Tomorrow, I go to Grandma's house for a long visit.
- July 10: I just got back from Grandma's house. My plant looks terrible! I expected a lot of **growth**, but its stem is bent over. I watered it, but I'm so worried.
- July 11: This morning I checked my plant again. It looks fine! The stem is strong and straight. The **soil** is damp and cool.
- August 1: Oh, dear! My plant is in trouble again! It looks like someone has put little holes in its leaves. What can I do? My plant **depends** on me!
- August 2: Dad told me to wash each leaf with dish soap. That sounds crazy!
- August 8: The soap worked! My plant looks great.
- September 1: This week my plant **produced** giant pods. I'll plant the **seeds**. Next summer I'll have more big, strong plants!

Sample Inference

"I read that Marco was gone and the plant looks terrible. I know that some plants need water every day. And so the plant must need water."

◀ = A good place to make an inference

Review Two- and Three-Letter Blends



crab



globe



stream



desk

Listen and Learn

Listen to the sounds in the blends. Choose the words with the same sounds.

1.



crack flip glad

2.



cross brick class

3.



wasp ask best

4.



strap split screech

Talk Together

Listen and read. Find the words with beginning and ending blends.

Over to You

What a Plant Needs

The stem of a plant is strong. Its stem is what helps it stand up tall. It has roots that hold it in the ground. Its roots drink water. Its leaves are what take in the sunshine.

Find out what conditions a plant needs to grow. Get some soil, some seeds, and four paper cups. Put soil in two cups and plant some seeds in each one. Give both cups water.

Place one cup in the sun and one in a dark closet. Plant seeds in the other two cups, but don't give them any water. Place one of these cups in the sun and the other in the closet.

Which seeds sprout? Which seeds grow?

What conditions do plants need to grow? Plants need sunshine. The seeds in the dark do not grow. Plants need water. The seeds with no water do not grow. The seeds that get both sunshine and water sprout and grow tall.

Work with a partner.

Take turns. Find a word from the passage that has a blend and read it aloud. Your partner should find the word and point to it.

Practice reading words with blends by reading "What a Plant Needs" with a partner.

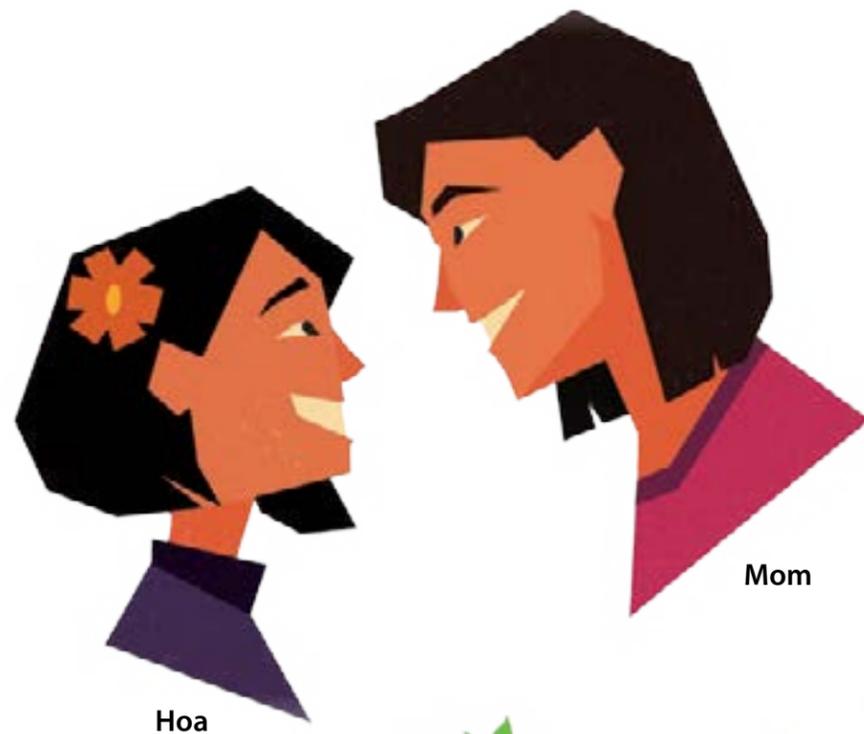
Read a Story

Genre

Realistic fiction is a story that sounds as if it could be true. The characters, plot, and setting all seem real.

Characters

Characters are the people in the story.



Hoa's Little Garden

by Susan Henderson



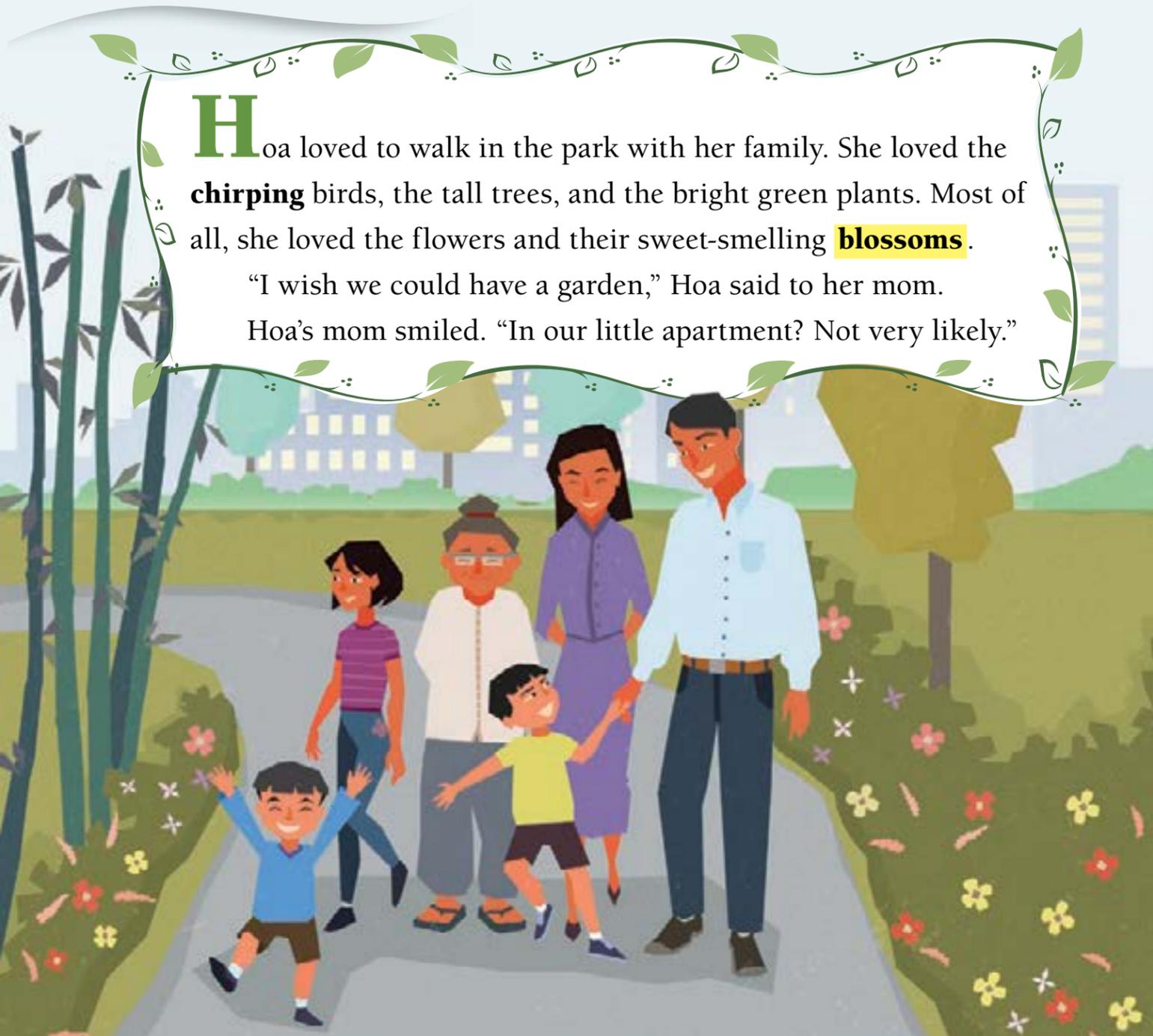
► **Set a Purpose**

A girl who loves flowers wants to grow her own garden. Find out what happens.

Hoa loved to walk in the park with her family. She loved the **chirping** birds, the tall trees, and the bright green plants. Most of all, she loved the flowers and their sweet-smelling **blossoms**.

“I wish we could have a garden,” Hoa said to her mom.

Hoa’s mom smiled. “In our little apartment? Not very likely.”



chirping singing

At home, Hoa drew pictures of flowers and plants. She **hung** them all around the apartment. She knew that colorful pictures made the apartment feel **lighter and brighter**.

Hoa’s mom picked up one of her drawings. “You’re a very talented artist, Hoa,” she said.

Hoa **replied**, “If we had real plants and flowers, I wouldn’t have to draw them.”

“Your name means *flower*,” her mom told her. “Maybe that’s why you love flowers so much.”



hung put on the wall

lighter and brighter happier and less dark

replied answered

► **Before You Continue**

1. **Setting** Where does Hoa live? How do you know?
2. **Make Inferences** What does Hoa like about flowers?

► **Predict**

How will Hoa get plants to grow in her apartment?

At school, Hoa's class planted bean **seeds**. The plants grew well in the classroom, so Hoa took her bean plant home and set it on a table. But in a few days, her little plant died.

"It doesn't have the right **conditions** to grow," said her mom. "It needs more light."



Hoa wanted a flower garden **badly**, but she knew there was no space for one in her family's apartment.

One day, when Hoa was working on one of her drawings, she looked outside. She saw something she **hadn't noticed** before. The **sun's rays were shining** into a corner of the balcony.

badly very much

hadn't noticed didn't see

sun's rays were shining sunshine was coming through

“Mom!” called Hoa. “Come look. The sun is shining on our **balcony**. I can have a garden!”

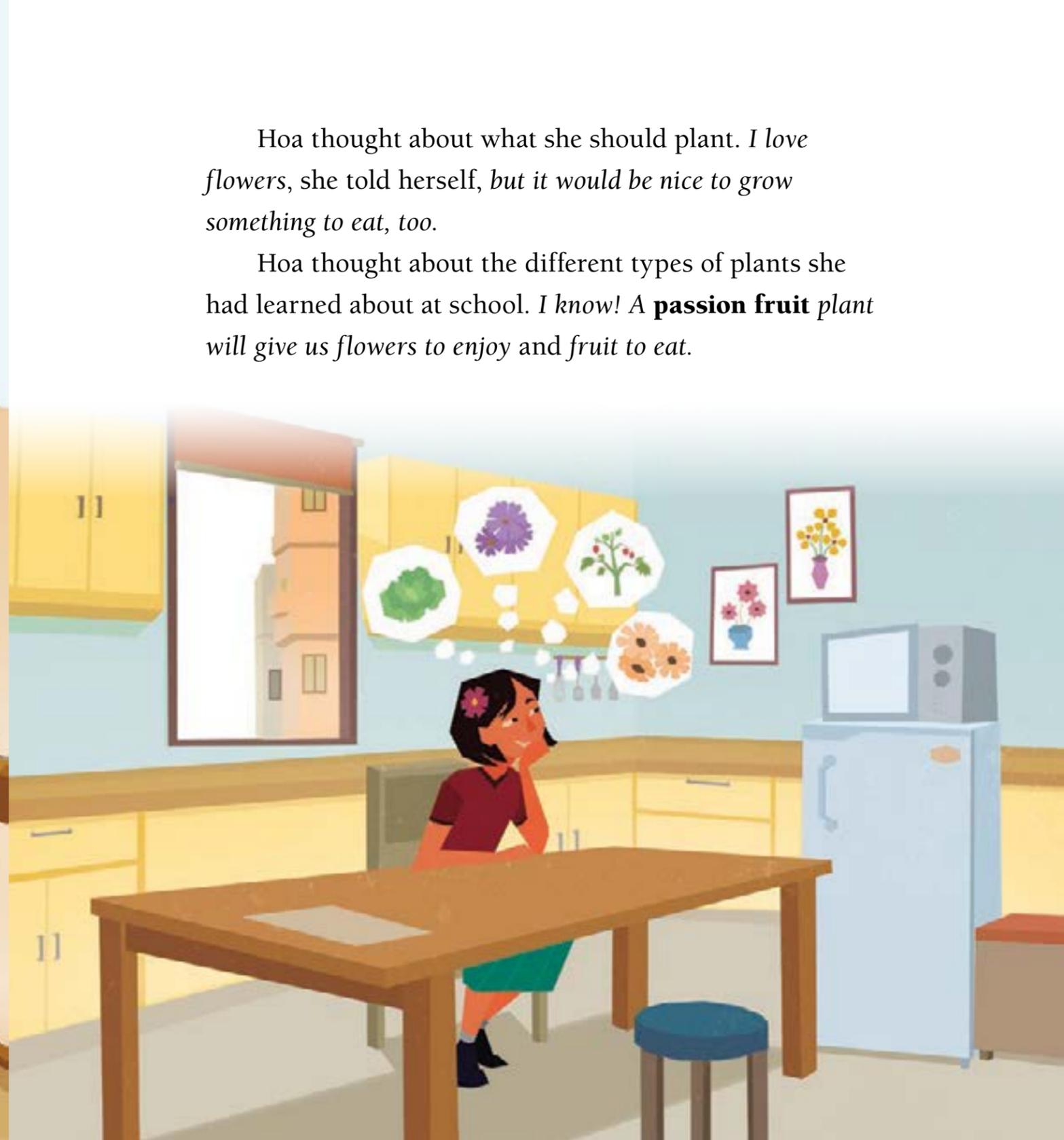
Her mom laughed. “Well, maybe you can have a *small* garden,” she said, “a *very* small garden. You can grow one plant in a pot. But that’s it. There is no space for more than one pot.”



balcony terrace

Hoa thought about what she should plant. *I love flowers*, she told herself, *but it would be nice to grow something to eat, too.*

Hoa thought about the different types of plants she had learned about at school. *I know!* A **passion fruit** plant will give us flowers to enjoy and fruit to eat.



passion fruit a tropical fruit with lots of seeds

► **Before You Continue**

1. **Confirm Prediction** Was your prediction correct? What else will Hoa need to do to keep her plants growing?
2. **Character** Do Hoa and her mom get along well? How do you know?

► **Predict**

Look at the picture. What will happen to the passion fruit **seeds**?

Hoa's mom got her a pot, a **spade**, and some **soil**. She helped Hoa cut open a passion fruit. Hoa took **a dozen** seeds from inside the fruit and planted them in the dirt.

“Do you think any of these **seeds** will sprout?” she asked her mom.

“I hope so, Hoa,” her mom said.



spade small shovel
a dozen twelve

Hoa checked her plant every morning and every night. One night, after weeks of checking, she finally spotted a little **sprout** growing in her pot.

A few weeks later, the sprout had grown into a small **vine**. The vine kept growing and growing until it spilled out of the pot.

“You need a stick for the vine to grow onto,” said her mom.

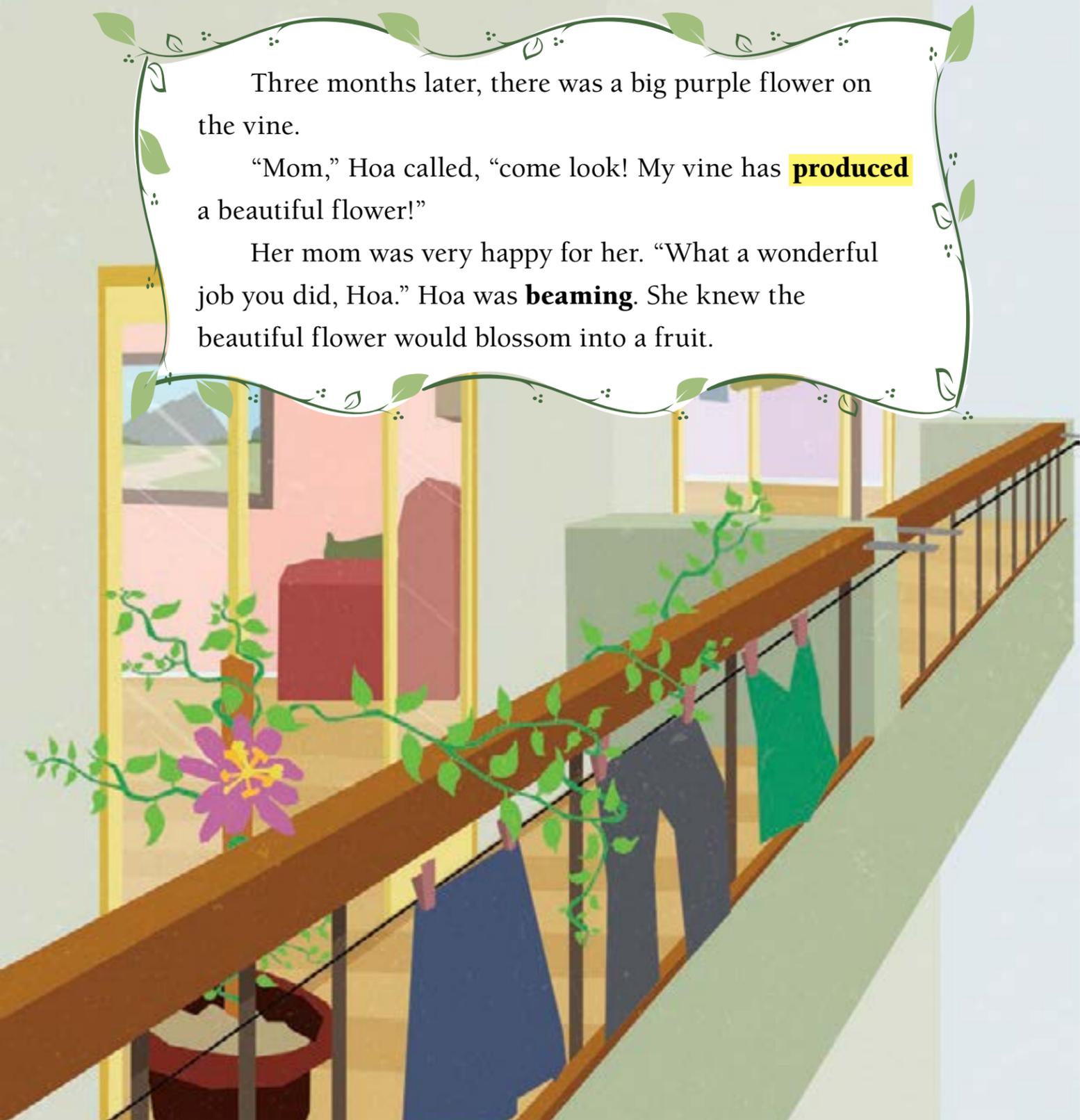


vine creeping plant

Three months later, there was a big purple flower on the vine.

“Mom,” Hoa called, “come look! My vine has **produced** a beautiful flower!”

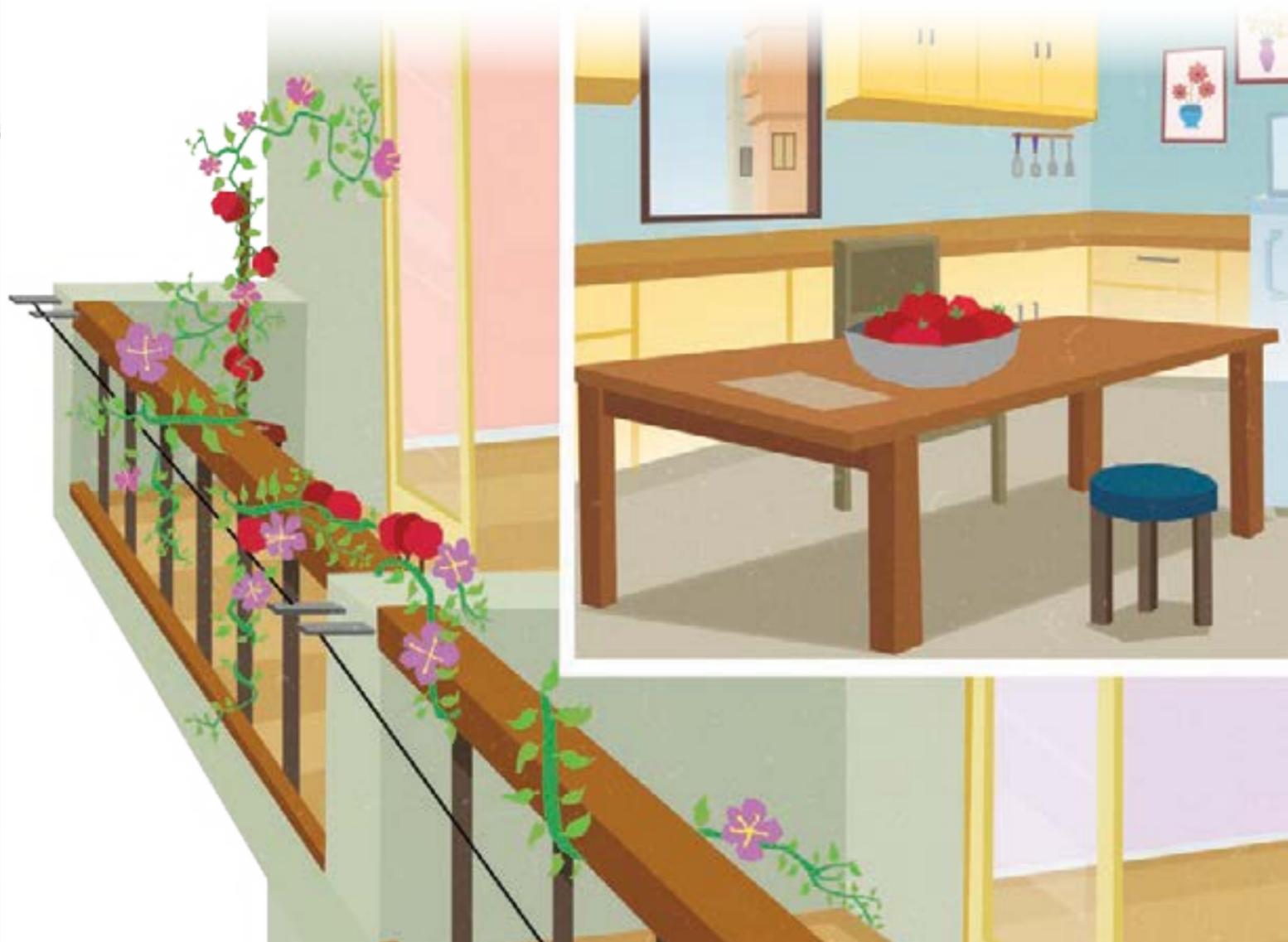
Her mom was very happy for her. “What a wonderful job you did, Hoa.” Hoa was **beaming**. She knew the beautiful flower would blossom into a fruit.



beaming smiling brightly

It wasn't long before Hoa's family was enjoying a bowl full of passion fruit. The family's next-door neighbor, Mrs. Nguyen, also had a bowl of passion fruit. Hoa's passion fruit vine had grown so much that it grew onto Mrs. Nguyen's balcony!

Hoa was very happy. Some of the passion fruit were sweet and juicy, and others were **tangy and tart**. But they were all very tasty.



tangy and tart sourish

I'm a great gardener, thought Hoa. She asked her mom for another pot.

“Another pot?” asked her mom. “What do you want to grow now?”

“Chilies,” Hoa answered. “Bright red ones!”

Her mom thought for a moment. “Hmmm,” she said, “maybe we should ask Mrs. Nguyen if there’s enough room on her balcony.” ❖



► Before You Continue

1. **Confirm Prediction** What did you think would happen to the passion fruit **seeds**? Were you surprised?
2. **Point of View** What does Hoa’s mom think about Hoa’s gardening? How do you know?

Meet the Author

Susan Henderson

Susan Henderson likes to grow flowers and basil on her Seattle balcony. She grows blue and red petunias and bright orange marigolds. Her cat, Frankie, likes the pots of grass she grows for him to munch on.

Before she moved to Seattle, the author lived in Australia. She taught many Vietnamese children, who are now grown up and have children of their own. She is still in touch with some of them through e-mail.

The author loves to read. She also enjoys writing stories that she hopes children will love to read, too.



Writing Tip

Find places in the story where Susan Henderson helps you see and feel what is happening. Then write your own sentences. Describe the way your favorite plant looks and feels.

Talk About It

1. What seems **realistic** about the story?
Give two examples.

The story is realistic because _____.

2. Imagine you are Hoa's mom. **Give information** to Hoa about the life **cycle** of a passion fruit plant.

First, the plant has _____. Next, _____. Then, _____.

3. Think about the passion fruit that Hoa grew.
What were some of its **characteristics**?

All the passion fruit _____.

Some passion fruit _____. Others _____.

Key Words

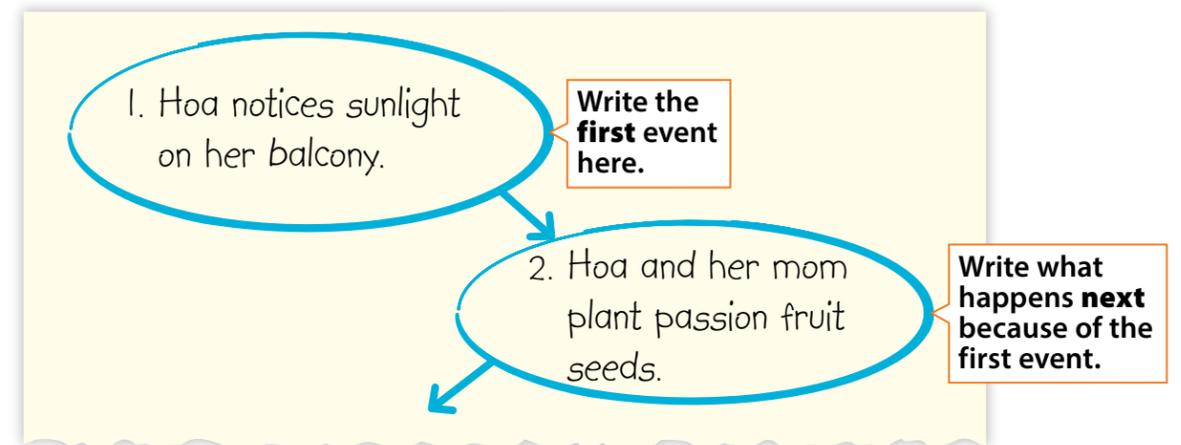
blossom	produce
characteristic	root
conditions	seed
cycle	soil
depend	sprout
growth	

Reread and Retell

Sequence

Make a sequence chain to show what happens in "Hoa's Little Garden." Notice that some of the events in the sequence influence future events.

Sequence Chain



Now use your sequence chain as you retell the story to a partner. Use time-order words and **Key Words**. Record your retelling.

First, _____.
Next, _____.
Then, _____.

Fluency

Practice reading with expression. Rate your reading.

Talk Together

What is amazing about how a passion fruit plant grows? Draw a picture. Use **Key Words** as labels. Share your picture with the class.

Write About It

Hoa worked with her mom to grow passion fruit. What do you think Hoa learned about the **growth** of a passion fruit plant? Write two sentences. Use **Key Words** to explain your thinking.

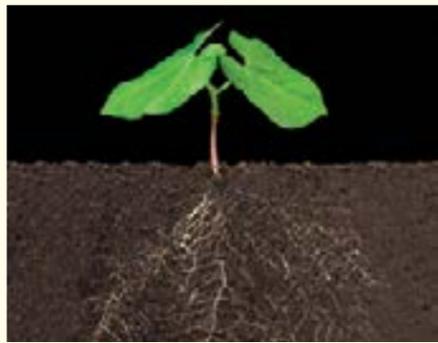
I think Hoa learned that _____.



Multiple-Meaning Words

Some words have more than one meaning. You can use context, or the words near the word, to figure out the correct meaning.

Roots is a **multiple-meaning word**. Compare these examples.



The plant has long **roots**.
Meaning: the plant part that grows underground



The crowd **roots** for its favorite team.
Meaning: cheers for

Try It Together

Read the sentences. Then answer the questions.

We live in the country. New homes sprout up every year. We sell carrots, bean sprouts, and other vegetables to our new neighbors.

1. What does sprout mean in the second sentence?

- A a new young plant
- B to appear suddenly
- C to grow shoots or buds
- D a plant part you can eat

2. Which word helps you understand the meaning of sprouts in the third sentence?

- A year
- B homes
- C neighbors
- D vegetables

Making Connections Read poems about pineapples and other amazing foods.

Genre A **haiku** is a poem that has three lines. The first line has five syllables. The second line has seven syllables. The last line has five syllables. How many syllables do you count in each poem?



Pineapples

Juicy, delicious,
Under a tropical sun.
Funny, **spiky** hair!

Gifts from the Earth

by Eloise Vivanco



spiky sticking up

Before You Continue

- Make Inferences** Based on the poem, what climate do you think pineapples need to grow in? Explain.
- Describe** Name two **characteristics** of pineapples, based on words in the poem.



Apples
 Falling from the trees,
 Red, green, yellow **takeout** treat!
Crunch one for my lunch.

Five Things You Might Not Know about Apples

- Apples have more **genes** than humans!
- Scientists think apples **originated** in Kazakhstan, but they grow in many countries under many **conditions**.
- There are 3,000 known **varieties** of apples.
- One of the strangest names of a variety of apple is "Winter Banana."
- Apple trees blossom in spring or summer.



takeout food intended to be eaten away from where it was made
Crunch Chew with a noisy, crackling sound

genes cells that determine **characteristics** of a living thing
originated where something began
varieties different types

- **Before You Continue**
1. **Make Inferences** Why are apples "takeout food?"
 2. **Details** List two facts about apples that you learned by reading the information on this page.

Rice

Green, wet **paddy field**,

Tall grass waving in the **breeze**.

Pass the hot bowl, please! ❖



More About Rice

- Rice is a grain, like corn or wheat.
- Rice can be grown in many places, but it needs **mild conditions**.
- In many Asian countries, it is common to eat rice for breakfast.
- Some artists will write your name on a grain of rice!

paddy field a watery field where rice is grown

breeze gentle wind

mild gentle

► Before You Continue

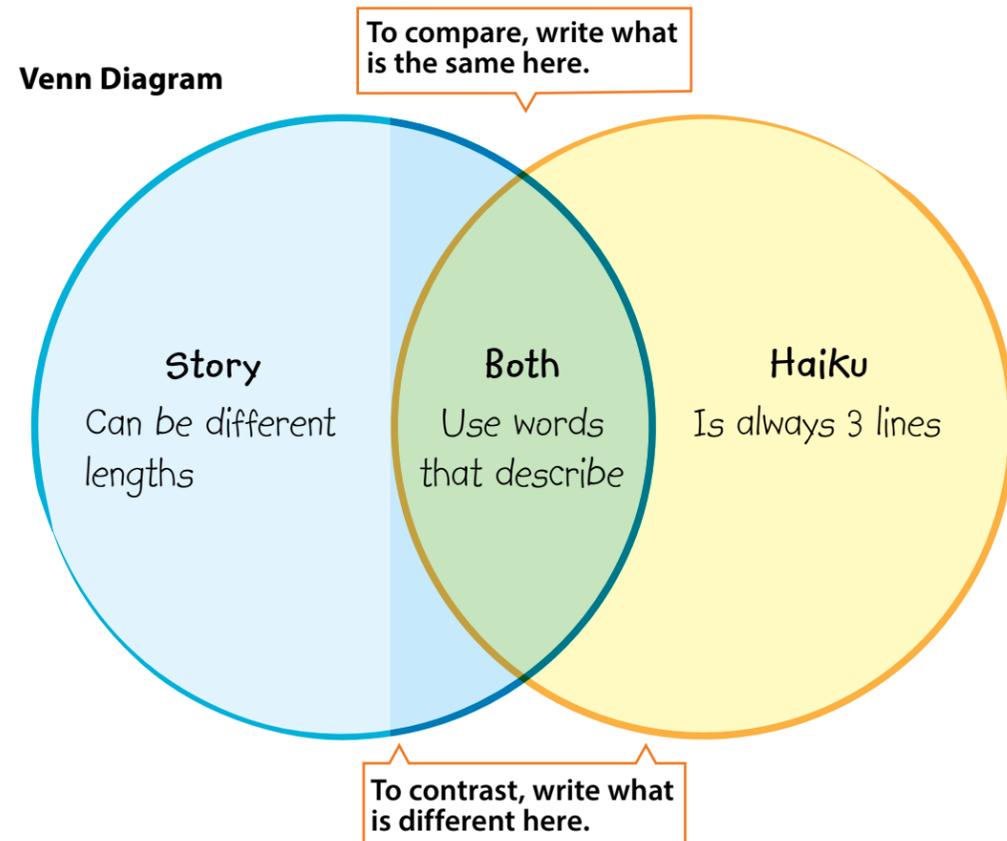
1. **Imagery** After reading the poem and looking at the picture, what do you imagine working in a paddy field might be like? What made you imagine it that way?
2. **Details** Name two things you learned about rice from the information on this page.

Compare Genres

A story and a haiku are different forms of writing, or genres. What about the two genres is the same? What about them is different? Work with a partner to complete the Venn diagram.

Key Words

blossom	produce
characteristic	root
conditions	seed
cycle	soil
depend	sprout
growth	



Talk Together

What is amazing about how a plant grows? Think about the story, the haiku, and the facts about plants. Use **Key Words** to talk about your ideas.

Grammar and Spelling

Plural Nouns

A noun names a person, place, thing, or idea. A **singular noun** shows “one.” A **plural noun** shows “more than one.”

Grammar Rules Plural Nouns

	singular noun	plural noun
<ul style="list-style-type: none"> Add -s to most nouns to show more than one. 	cycle flower 	cycles flowers 
<ul style="list-style-type: none"> Add -es to nouns that end in x, ch, sh, ss, z, and sometimes o. 	bush tomato	bushes tomatoes
<ul style="list-style-type: none"> For most nouns that end in y, change the y to i and then add -es. For nouns that end with a vowel and y, just add -s. 	berry  family  boy day	berries  families boys days

Read Plural Nouns

Read this passage. What plural nouns can you find?

Hoa loved the chirping birds, the tall trees, and the bright green plants. Most of all, she loved the flowers and their sweet-smelling blossoms.

Write Plural Nouns

What do you see on pages 178–179? Tell your partner what you see. Then write a sentence for your partner. Use a plural noun.

Define and Explain

Listen to Lily and Nico's dialogue. Then use **Language Frames** to define and explain. Talk about places where plants live.

Language Frames

- _____ means _____.
- For example, _____.

Dialogue

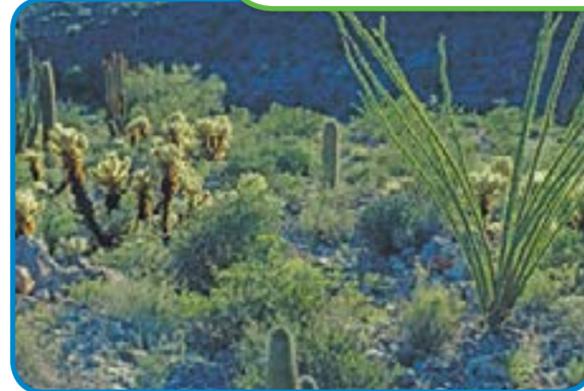
1.

What does desert mean?



2.

Desert means a place where there is very little rain. Plants in the desert are unusual.



3.

They can store water. For example, this cactus fills its stem with water when rain falls.



4.

They can change to survive. For example, this plant drops its leaves when it is dry.



Science Vocabulary

Key Words

Look at the pictures. Use **Key Words** and other words to talk about ecosystems, or different places where plants live.

Key Words

city
desert
rainforest
vine
weed

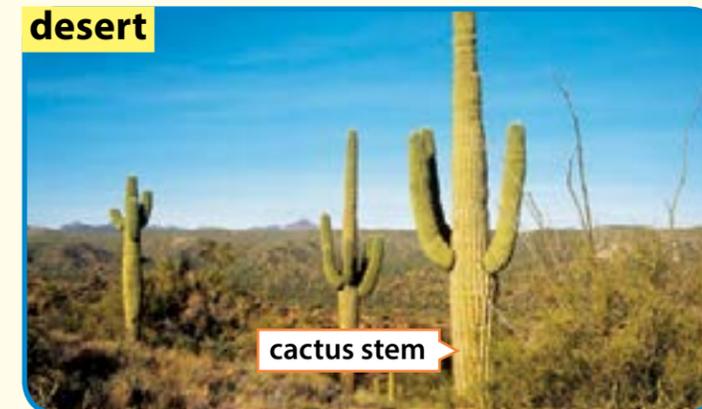
city



weed

In cities, plants grow through cracks and in open areas around buildings.

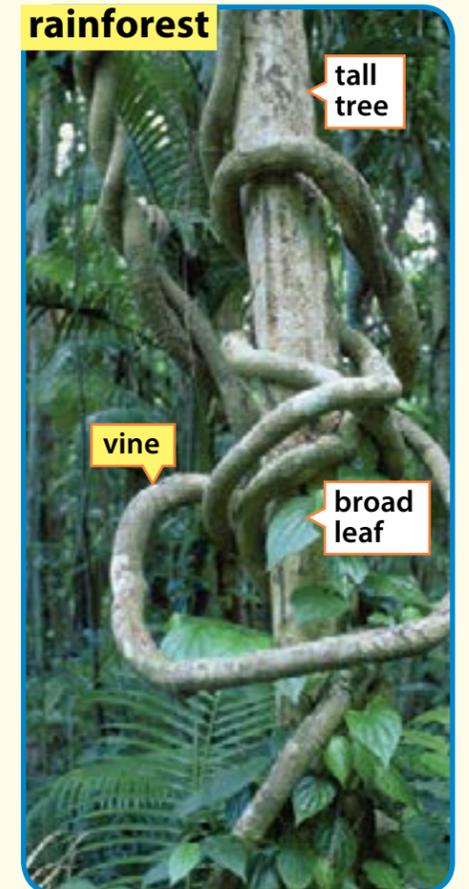
desert



cactus stem

Many plants in deserts have thick stems that can store water.

rainforest



tall tree

vine

broad leaf

In rainforests, broad leaves, tall trees, and climbing vines collect sunlight.

Talk Together

What is amazing about where plants can grow? Talk with a partner. Try to use **Language Frames** from page 184 and **Key Words** to define words and explain your ideas.

Main Idea and Details

When you explain something, start with the most important idea. This is called the **main idea**. Then give **details** to add more information.

Look at the pictures of interesting desert plants. Read the text.



This cactus can store water.



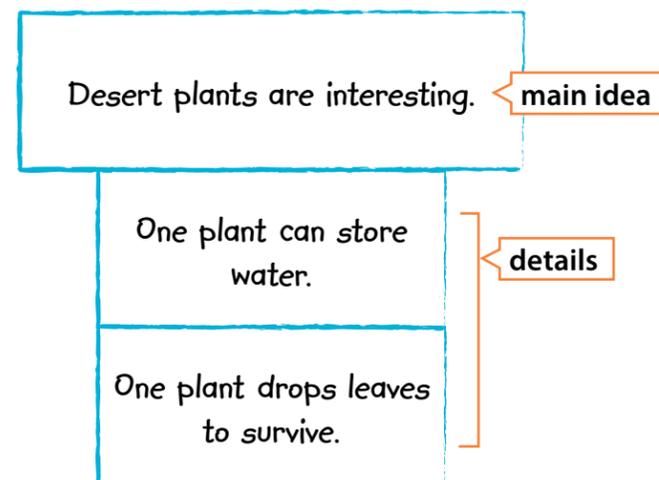
This plant drops leaves to survive.

Map and Talk

You can use a main idea and details diagram to organize information. Here's how you make one.

The main idea goes in the top box. Each detail is listed under the top box.

Main Idea and Details Diagram



Talk Together

Look back at page 185. Make a main idea and details diagram with this main idea: **Rainforest plants are unusual.** Tell your partner about your diagram.

Academic Vocabulary

More Key Words

Use these words to talk about "A Protected Place" and "Rosie's Reports."

diversity

noun



Diversity means a lot of different people or things. Our school has a great **diversity** of people.

environment

noun



Your **environment** is the kind of place where you live. This is a hot, dry **environment**.

organism

noun



An **organism** is a living thing. This leaf and insect are both **organisms**.

protect

verb



You **protect** something when you keep it safe. Sharp spines **protect** the plant from animals.

unique

adjective



Unique things are different from other things. The yellow flower is **unique**.

Talk Together

Make a Vocabulary Study Card for each **Key Word**.

Write the word on the front.

On the back, write the meaning and a sentence. Use the cards to quiz your partner.

protect

to keep safe
A fence protects my garden.

Learn to Make Inferences

Look at the picture. It does not show the complete plant. Look at the details to figure out, or **make an inference** about, what this plant is like.



When you read, you have to **make inferences**, too.

How to Make Inferences

1. Look for details in the text.
2. Think about what you already know about the details and the topic.
3. Put your ideas together. What else can you figure out about the details?

I read _____.

I know _____.

And so _____.

Language Frames

- I read _____.
- I know _____.
- And so _____.

Talk Together

Read Nico's report, "So Many Plants!" Read the sample inference. Then use **Language Frames** to make inferences. Tell a partner about them.

Report

So Many Plants! by Nico Lutz

This summer, my family drove to our new home. Along the way, we saw many different **environments**. Our country has such a **diversity** of plants!

In my old home, the ground is covered with sidewalks and streets, but there are still different kinds of plants. People grow plants in pots. Some plants sprout in open areas around buildings.

In another place we saw, there are tall trees all around. Small, leafy plants grow around them. It's a good environment for **organisms** like snails.



The plants are so different in our new home! The cacti are **unique**. For example, some have round stems. Others have long, thin branches. We have to **protect** ourselves from their sharp spines!

Sample Inference

"I read that the ground is covered with sidewalks and streets. I know that **cities** are like this. And so they must have lived in a city."

◀ = A good place to make an inference

Plurals -s, -es, -ies



tree + s = trees



dish + es = dishes



puppy + ies = puppies

Listen and Learn

Listen to each sentence. Choose the correct plural to complete the sentence.

1. I have one **watch**. He has two _____.



watchies watchs watches

2. One fluffy **cat** is cute. Two fluffy _____ are even cuter.



cates cats caties

3. Tam has one **pony**. Sam has three _____.



ponies ponys ponyes

4. Two _____ is better than one **penny**.



pennys pennies pennyes

Talk Together

Listen and read. Find the plural words in the passage.

Over to You

Amazing Tropical Rainforests

Tropical rainforests are very hot and humid. Rainforests get at least 75 inches of rain each year. Many get even more rain.

There are four layers in a tropical rainforest. The trees in the top two layers are very tall. The top layers get most of the sunlight. The third layer is made up of leaves, branches, and vines. This layer gets much less sunshine. This means that only small plants and trees grow there. The fourth layer is the forest floor. Very little sunlight reaches the forest floor. Hardly any plants grow there. Animals, insects, and birds live in all four layers.

Rainforests help Earth in many ways. For example, they produce 40 percent of the world's oxygen. Rainforests also clean the air of greenhouse gases. They help maintain Earth's water cycle. They also provide foods for people. Finally, half of Earth's animal and plant species live in rainforests. They are truly amazing places.

Work with a partner.

Choose five plural words in the passage and list them. Take turns with your partner to make up new sentences using the words.

Practice reading words with plural endings by reading "Amazing Tropical Rainforests" with a partner.

Read a Science Article

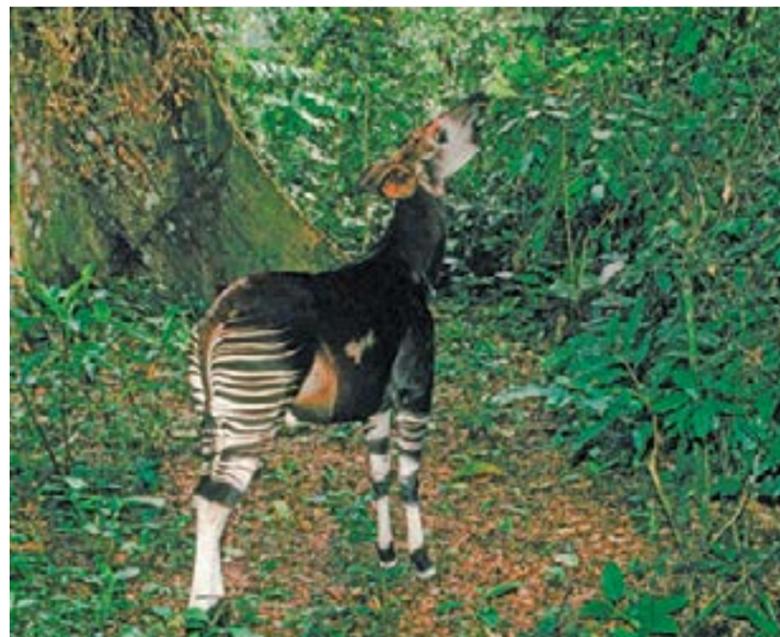
Genre

A science article is **nonfiction**. It gives facts about a topic in nature.

Text Features

Look for **photographs with captions**. They help you understand the text better.

photograph



caption

▲ An okapi eats leaves.

A Protected Place

by Elizabeth Sengel



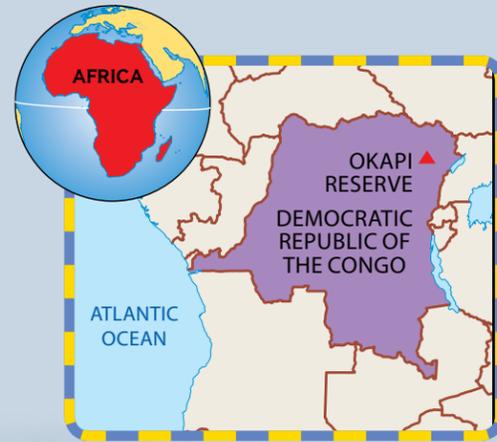
NATIONAL
GEOGRAPHIC
EXCLUSIVE

► **Set a Purpose**

Find out about a **rainforest** in Africa.

A Special Place

The Okapi Reserve is an amazing place, full of amazing plants. It is in the northeastern corner of Congo and is part of a tropical **rainforest** called the Ituri Forest. The reserve covers 5,200 square miles of land.



If you flew over the reserve in a plane, all you would see is a thick, green cover. But plant life fills the forest. From top to bottom, it is a tangle of roots, branches, and leaves. The forest **is so dense** that very little sunlight **seeps in**.



▲ The tops of trees create a cover over the Ituri Forest.

is so dense has so many plants
seeps in enters

► **Before You Continue**

1. **Main Idea and Details** Give two details about the Okapi Reserve that support the idea that it is an amazing **environment**.
2. **Make Inferences** What would the environment of the Okapi Reserve be like?

A Variety of Plants

One amazing thing about the Okapi Reserve is its **diversity** of plants. There are hundreds of **native species of plants** in the reserve. **Vines dangle** from trees. The leaves of giant ferns curve like dinosaur tails. Tall trees reach toward the sky and make a roof with their thick leaves.

▼ A strangler fig grows around another tree in the forest.



native species of plants
different kinds of plants
that grow naturally
dangle hang

▼ An okapi runs through the woods.



The Purpose of the Reserve

The Okapi Reserve was created in 1992. The purpose of the reserve is to **protect** the rich **diversity** of plants and animals.

The reserve's name comes from one of those animals—the okapi. This strange-looking animal has the stripes of a zebra and the neck of a horse. But guess what? It's **related to** the giraffe!



related to in the same animal
family as

► Before You Continue

1. **Use Text Features** How do the photographs help you understand the text?
2. **Make Inferences** Why was it important to create the reserve?

A Leafy Home

Many different animals, such as elephants, duikers, and pottos, depend on the forest. Some of the animals make their homes in trees.

yellow-backed duiker



potto, or tree bear



▼ An elephant eats plants in the forest.



Many animals also rely on plants for food. Remember the okapi? It eats the leaves of plants that grow well in the **dim** light of the forest. It has a long tongue that rips the leaves off the branches. The Okapi Reserve has plenty of leaves for okapis to **munch**!

▼ An okapi eats leaves that grow in shady spots.



dim low, weak
munch eat

► Before You Continue

1. **Make Connections** How does the okapi's long tongue help the animal survive?
2. **Details** Name two ways the plants in the reserve meet the animals' needs.

A Home for Humans

People make their home in the Okapi Reserve, too. **Mbuti Pygmies** have been living in the **rainforest** for hundreds of years. According to one **botanist**, Mbuti Pygmies are “walking dictionaries of nature.” They understand everything about the forest, and they rely on it for food, shelter, and clothing.

▼ A Mbuti Pygmy child fishes.



Mbuti Pygmies A group of people native to Africa
botanist scientist who studies plants

Mbuti Pygmies travel from place to place to hunt and fish. They don't just catch **game**, though. They also collect insects, seeds, fruit, and honey to eat. They make nets, arrows, and other **necessities** from forest materials like wood, bark, mud, and leaves.

▼ Mbuti Pygmies made these huts from forest materials.



game wild animals to eat
necessities things that they need

► Before You Continue

1. **Make Inferences** Why do you think Pygmies know so much about the **rainforest**?
2. **Details** Name three things that Pygmies do in the forest.

A Brave Botanist

Corneille Ewango is a botanist who works on the reserve. He loves the forest and its plants and animals.

In 1996, something terrible happened. A war **broke out** in Congo. Soldiers **invaded the forest**. They **destroyed** plants and killed animals.

Many of the workers on the reserve ran away, but Ewango wouldn't leave. He knew he had to save the forest. "I was afraid," he says, "but I didn't have a choice."

Soldiers march during the war. ▶



broke out started
invaded the forest came into the forest with force
destroyed ruined



▲ This bridge is important to Ewango. He hid under it once during the war.

Ewango rushed to save what he could. He grabbed computers and buried **data files** in the forest. He packed thousands of **plant samples** in boxes. Friends kept the plants safe.

Ewango hopped on a bicycle and carried other plants into a neighboring country.

Because of Ewango, **unique** and valuable plants were saved. They would continue to grow again after the fighting stopped in 2002.

data files folders with information
plant samples different kinds of shrubs, bushes, and trees

▶ Before You Continue

1. **Details** Why did Ewango stay in the **rainforest** during the war?
2. **Make Inferences** How do you know that Ewango is a brave person?

The Future of the Reserve

Today, the Okapi Reserve still faces **threats**. Sometimes people destroy animals' homes. They chop down trees. Yet Ewango and other people work every day to solve these problems.

▼ People sometimes sneak into the Okapi Reserve. They cut down trees.



threats problems

Ewango believes that Congo needs more scientists to study its forests. He is working hard to **train a new generation of students**.

He wants young people to understand and **protect** the Okapi Reserve and other **rainforests** in Congo. ❖

▼ Ewango wants to train young people. He wants to help protect forests in Congo.



train a new generation of students
teach children about plants

► Before You Continue

- 1. Details** Name two problems that the Okapi Reserve has today.
- 2. Paraphrase** What does Ewango believe about Congo? How is he helping?

Talk About It

1. Give two facts about nature from the science article.

The first fact _____. The second fact _____.

2. Define the word *reserve* and explain the purpose of the Okapi Reserve.

Reserve means _____. The purpose of the Okapi Reserve is _____.

3. How do you think the author of the article feels about the Okapi Reserve **environment**?

I think the author _____. I can tell because _____.

Key Words

city	protect
desert	rainforest
diversity	unique
environment	vine
organism	weed

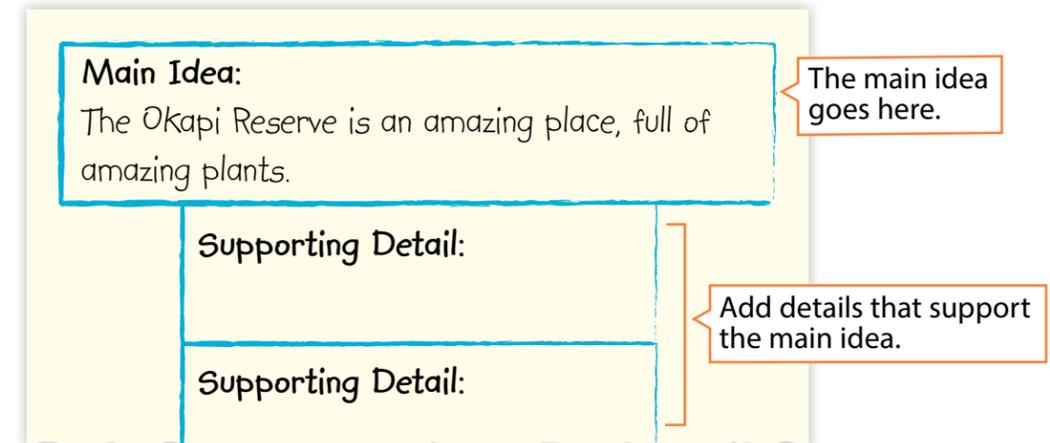


Reread and Summarize

Main Idea and Details

Make a main idea and details diagram for "A Protected Place."

Main Idea and Details Diagram



Now use your diagram as you summarize "A Protected Place" for a partner. Use the sentence frames and **Key Words**. Record your summary.

The main idea is _____.
A supporting detail is _____.

Write About It

The photographs in the science article help you understand the ideas. Write a caption to explain the photograph on page 193. Use at least one sentence and at least one **Key Word**.

This is _____.



Fluency

Practice reading with phrasing. Rate your reading.

Talk Together

Choose a photograph from "A Protected Place." Use **Key Words** to tell a partner what the photograph shows about the Okapi Reserve.

Suffixes

A **suffix** is a word part. A suffix comes at the end of a word. It changes the word's meaning.

Look at this example. How does the word **weed** change?

The suffix **-y** means "full of."

weed + -y = weedy

Weedy means "full of weeds."



Making Connections Read this blog to learn more about the plants of the Okapi Reserve.

Genre A **blog** is a site on the Internet where you can post your thoughts about a topic for others to read.



Try It Together

Read each item. Choose the correct answer.

1. The suffix **-less** means "without." What does **vineless** mean?

- A with vines
- B full of vines
- C without vines
- D the state of vines

2. The suffix **-ness** means "state of." What does **uniqueness** mean?

- A in a unique way
- B full of unique things
- C without anything unique
- D the state of being unique

breeding station place where they can have babies

Before You Continue

1. **Make Inferences** How does Rosie probably feel about okapis? Why do you think so?
2. **Predict** What do you think this blog will be about? Explain why you think so.

Category: [Okapi](#) | Date: November 8

Collecting Leaves

It is early in the morning. Baya and Apomau are already preparing their **machetes**. They will walk 45 minutes to reach the place where they will cut the leaves for today. In the afternoon, some of the leaves will be fed to the okapis.



◀ Apomau and Baya have collected and bundled their leaves. It took them less than three hours.

It is amazing how well they and the other workers know the forest! They are able to find the right amount of leaves every day.

POSTED BY: Rosie

[7 COMMENTS](#) [LINKS TO THIS POST](#)

Search All Posts

GO!

BLOG ARCHIVE

November

September

May

February

January

POSTS BY CATEGORY

okapi

Africa

Okapi Reserve

MOST POPULAR KEYWORDS

protected

rainforest

November

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

<< October

Category: [Okapi](#) | Date: November 10

Preparing Leaves

The workers bring the leaves to a special building. The next step is to prepare 1,536 bundles of leaves! These are the leaves that the okapis will eat in the afternoon and the next morning. ❖



▲ A worker gets ready to wrap a bundle of leaves. The bundle will hang in an okapi's pen.

POSTED BY: Rosie

[4 COMMENTS](#) [LINKS TO THIS POST](#)

machetes large, heavy knives

► Before You Continue

1. **Make Inferences** Why do you think Baya and Apomau know the **rainforest** so well?
2. **Steps in a Process** List the steps the workers follow to feed the okapis.

Compare Text Features

A science article and a blog post both have captions. What other text features do they both have? What different text features do they have? Work with a partner to complete the comparison chart.

Comparison Chart

"A Protected Place"	"Rosie's Reports"
Feature: captions Example: An okapi runs through the woods.	Feature: captions Example: A worker gets ready to wrap a bundle of leaves.
	Feature: Date line Example: Date: November 8

Talk Together

What is amazing about the plants in the Okapi Reserve? Think about the science article and the blog postings. Use **Key Words** to talk about your ideas.

Key Words

city	protect
desert	rainforest
diversity	unique
environment	vine
organism	weed

Grammar and Spelling

More Plural Nouns

Count nouns are nouns that you can count. They change in different ways to show the plural form.

Noncount nouns are nouns that you cannot count. They have only one form for "one" and "more than one."

Grammar Rules Plural Nouns

Count Nouns

- Add **-s** or **-es** to make most nouns plural.
- A few nouns use special forms to show the plural.

tree	▶	trees
lunch	▶	lunches
tooth	▶	teeth
child	▶	children

Noncount Nouns

- Use the same form to name "one" and "more than one."

corn	▶	corn
sunshine	▶	sunshine

Read Plural Nouns

Read these sentences based on "A Protected Place." What plural nouns can you find? Can you identify a noncount noun?

The forest is a tangle of roots and branches. It is so dense that very little sunlight seeps in.

Write Plural Nouns

Make a list of the things you see on pages 204–205. Compare your list with a partner's.

Writing Project

Write Like a Scientist

Write an Article

Write an article that explains what you think is so amazing about plants. Add your article to a class science magazine to share with others in your school.

Study a Model

An article includes facts and details about a topic. Read this article that Mariah wrote about plants.

Plants Are Everywhere

by Mariah Ruiz

Plants are amazing because they can grow in so many different places. We know that plants grow in soil, but they pop up in other places, too. Did you know that seeds can sprout in tiny cracks on sidewalks? Some daisies, for example, grow big enough to break the pavement!

Other plants, like seaweed, live completely underwater. There are even plants, like mistletoe, that grow on other plants!

So, the next time you're outside, take a look around. You might see a plant or two growing in the most unusual places!

The **topic sentence** tells the main idea.

The **concluding sentence** connects all the ideas. It makes the writing complete.

Each **fact or detail** supports the main idea. The writing is focused.

Prewrite

1. **Choose a Topic** What topic will you write about in your article? Discuss with a partner to choose the best one.

Language Frames

Tell Your Ideas

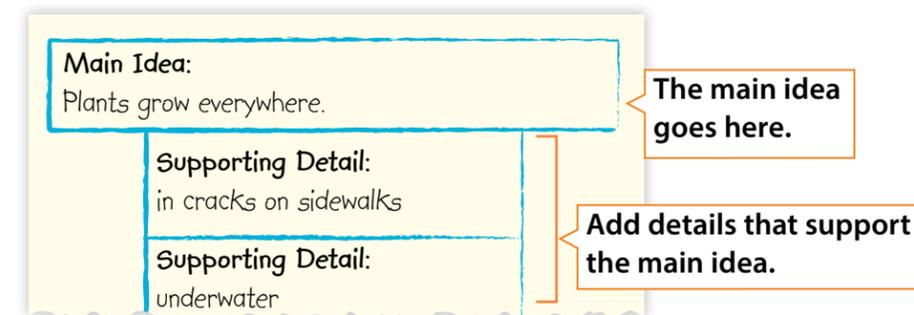
- Plants can _____. That might be a good topic.
- I know a lot about _____, so I'll write about that.
- My favorite plant is _____. I would like to say more about it.

Respond to Ideas

- I think/do not think that is a good topic because _____.
- _____ sounds interesting. Tell me more.
- I like that plant, too. I would like to read about _____.

2. **Gather Information** Find all the facts and details you'll need for your article. Do they all tell about the same topic?
3. **Get Organized** Use a main idea and details diagram to help you organize what you'll say.

Main Idea and Details Diagram



Draft

Use your main idea and details diagram to write your draft.

- Turn your main idea into a topic sentence.
- Turn your details into sentences that tell more about the main idea.

Writing Project, *continued*

Revise

- 1. Read, Retell, Respond** Read your draft aloud to a partner. Your partner listens and retells what your article is about. Next, talk about ways to improve your writing.

Language Frames

Retell

- The topic is _____.
- Most of the facts and details tell about _____.

Make Suggestions

- The detail about _____ does not tell about _____. Can you take out that detail?
- I like the examples you used to tell about _____.

- 2. Make Changes** Think about your draft and your partner's suggestions. Then use revision marks to make your changes.

- Delete details that don't tell about the topic or support the main idea.

Did you know that seeds can sprout in tiny cracks on sidewalks?
~~There are many plants near my house.~~

- Add details or examples that support your main idea and keep your writing focused.

Some daisies, for example, grow big enough to break the pavement!
 Did you know that seeds can sprout in tiny cracks on sidewalks? ^

Spelling Tip

- ✓ To make most nouns plural, add **-s** or **-es**. For most nouns ending in **y**, change **y** to **i** and add **-es**.

Edit and Proofread

Work with a partner to edit and proofread your article. Check the spelling of plural nouns. Use revision marks to show your changes.

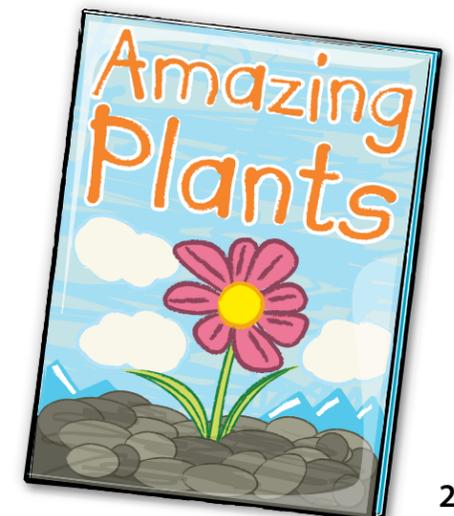
Present

- 1. On Your Own** Make a final copy of your article. Then choose a way to share it with your classmates. You might want to read your article aloud, or you can just retell it from memory.

Presentation Tips

If you are the speaker...	If you are the listener...
Speak slowly and clearly.	Take notes to help you understand and remember.
Provide more details if your listeners do not understand what you thought was amazing.	Make inferences based on what you know.

- 2. With a Group** Work with your classmates to put all the articles into a science magazine. Make several copies to share with others in your school. You can post your magazine online, or turn it into a series of web pages.





?
BIG
Question

What is so amazing about plants?

Share Your Ideas

Choose one of these ways to share your ideas about the **Big Question**.

Write It!

Make a Cartoon

Draw a cartoon about an amazing plant. Write a caption to show what is so amazing about the plant. Explain your cartoon to the class.



Talk About It!

Talk Show

Choose classmates to talk about each selection in this unit. Each guest on the talk show gives amazing information they have learned about plants. Use formal language.

Do It!

Perform a Skit

Write a skit about people who work with plants. Show why the people think plants are amazing. Decide whether to use formal or informal language. Perform your skit for the class.

Write It!

Plant Poem

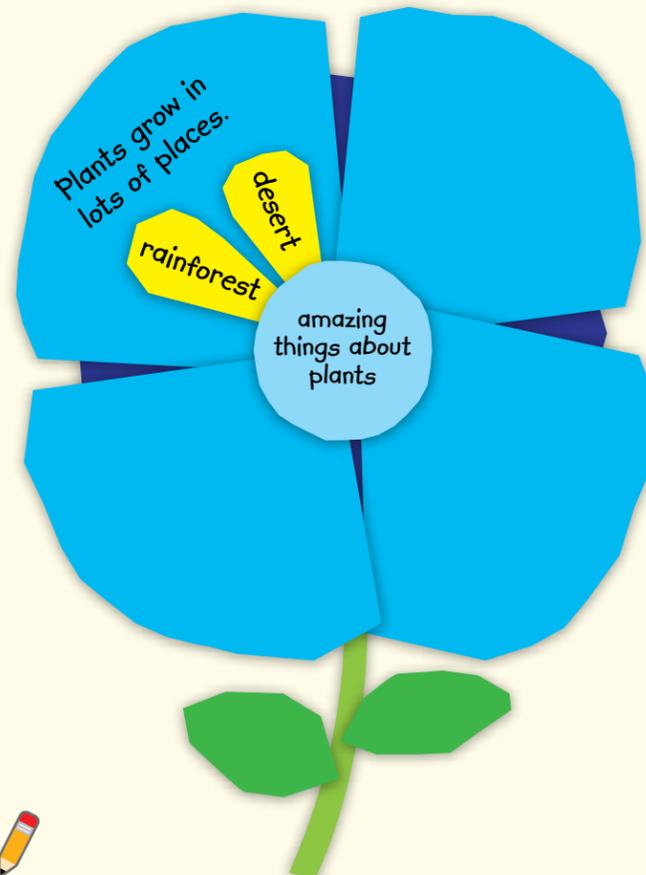
Think about your favorite plant. Write a haiku about it. Count the syllables in each line. Then read your poem aloud to a partner.



Talk Together

In this unit, you found lots of answers to the **Big Question**. Now, use your concept map to discuss the **Big Question** with the class.

Concept Map



Write a Journal Entry

Choose one amazing thing about plants from your concept map. Write a journal entry about it.