

# Needs of Living Things

Lesson 1 Needs of Plants

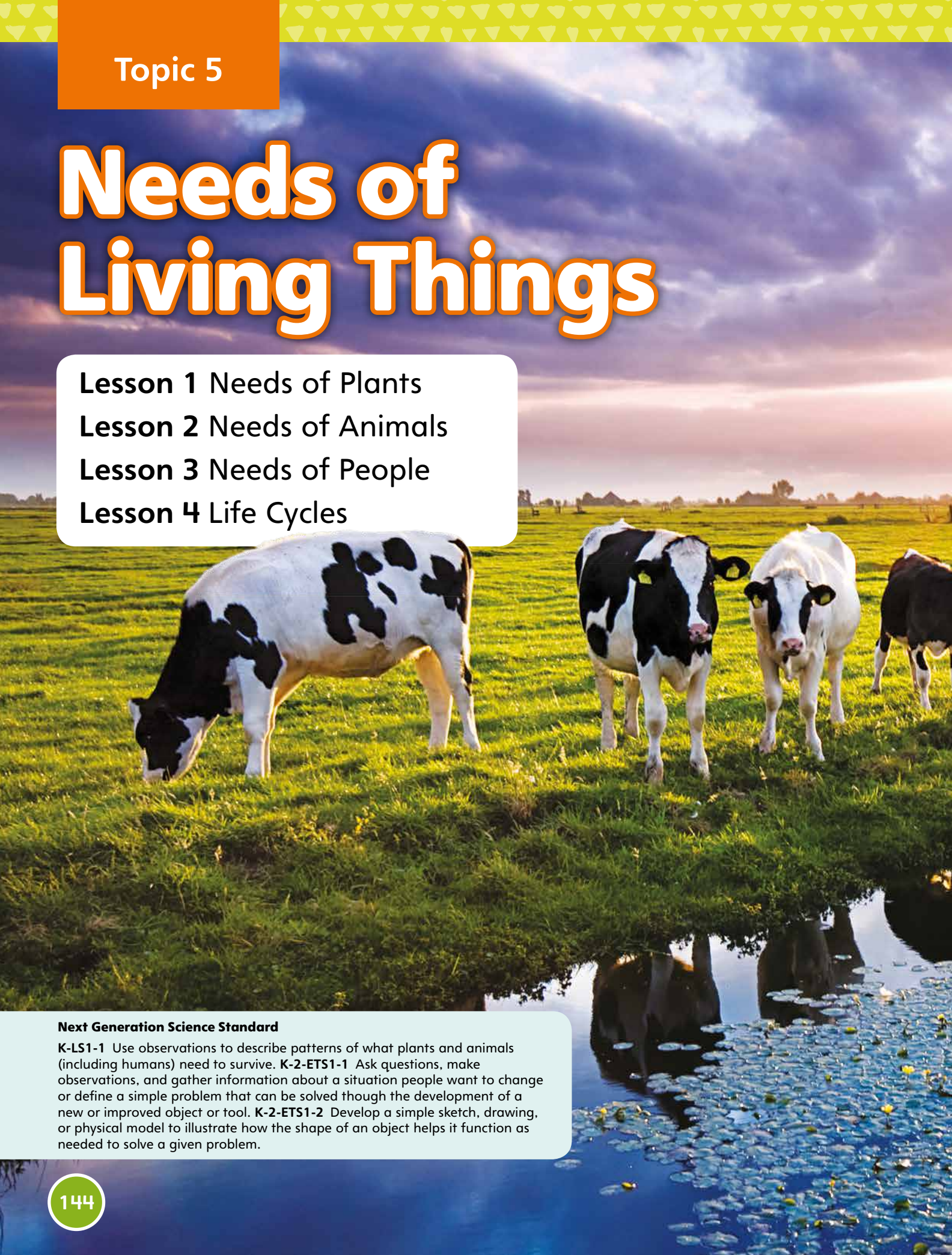
Lesson 2 Needs of Animals

Lesson 3 Needs of People

Lesson 4 Life Cycles

## Next Generation Science Standard

**K-LS1-1** Use observations to describe patterns of what plants and animals (including humans) need to survive. **K-2-ETS1-1** Ask questions, make observations, and gather information about a situation people want to change or define a simple problem that can be solved through the development of a new or improved object or tool. **K-2-ETS1-2** Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.



Go online to access  
your digital course.



VIDEO



eTEXT



INTERACTIVITY



SCIENCE SONG



GAME



ASSESSMENT

## The Essential Question

What do plants and animals  
need to survive?

### Show What You Know

Draw a circle on things plants  
and animals need to live.

## Let's Build a Park

What do plants and animals need to live in a park?



Hi! My name is Ms. Chen. I am a wildlife biologist. The town is building a new park. Help me make a book that shows the things plants and animals will need to live in the park. The path shows the Quest activities you will complete as you work through the topic. Check off your progress each time you complete an activity with a **QUEST CHECK  OFF**.



### Quest Check-In 1

#### Lesson 1

Show what plants need to live in the park.



#### Next Generation Science Standard

K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.

## Quest Check-In 3

### Lesson 3

Tell what people will need to be able to spend a day in the park.



Watch a video about a wildlife biologist.

## Quest Check-In Lab 4

### Lesson 4

Learn what caterpillars need to live so that the park can have beautiful butterflies.



## Quest Check-In 2

### Lesson 2

Identify what the fish in a koi pond need to live.

## Quest Findings

Complete the Quest! Draw a picture of what the park should look like so that plants and animals can live there.

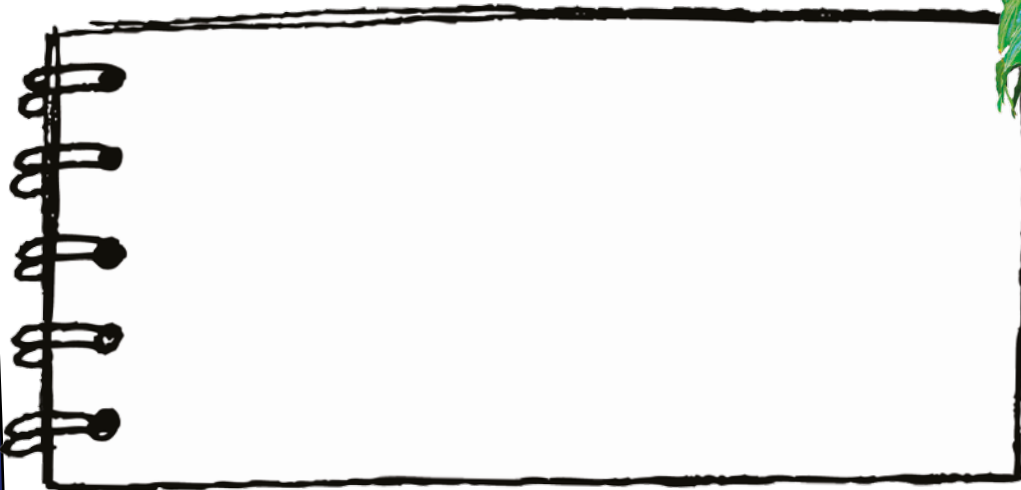


# What if **plants** do not get what they **need**?

What observations can you make to answer the question in the title?

## Procedure

- 1. **Observe** the photos of the plants.
- 2. Record your observations.



## Analyze and Interpret Data

- 3. **Evaluate** Which plant is getting what it needs?  
Tell a partner.

### Science Practice

You **make observations** to help answer a scientific question.





GAME

Practice what you learn with the Mini Games.

## Alike and Different

Wildlife biologists observe animals. Read about ways big cats and pet cats are alike and different.

### Big Cats and Pet Cats

Big cats and pet cats both need food and water to live. Big cats, like tigers, must find their own food and water. Pet cats get food and water from their owners.

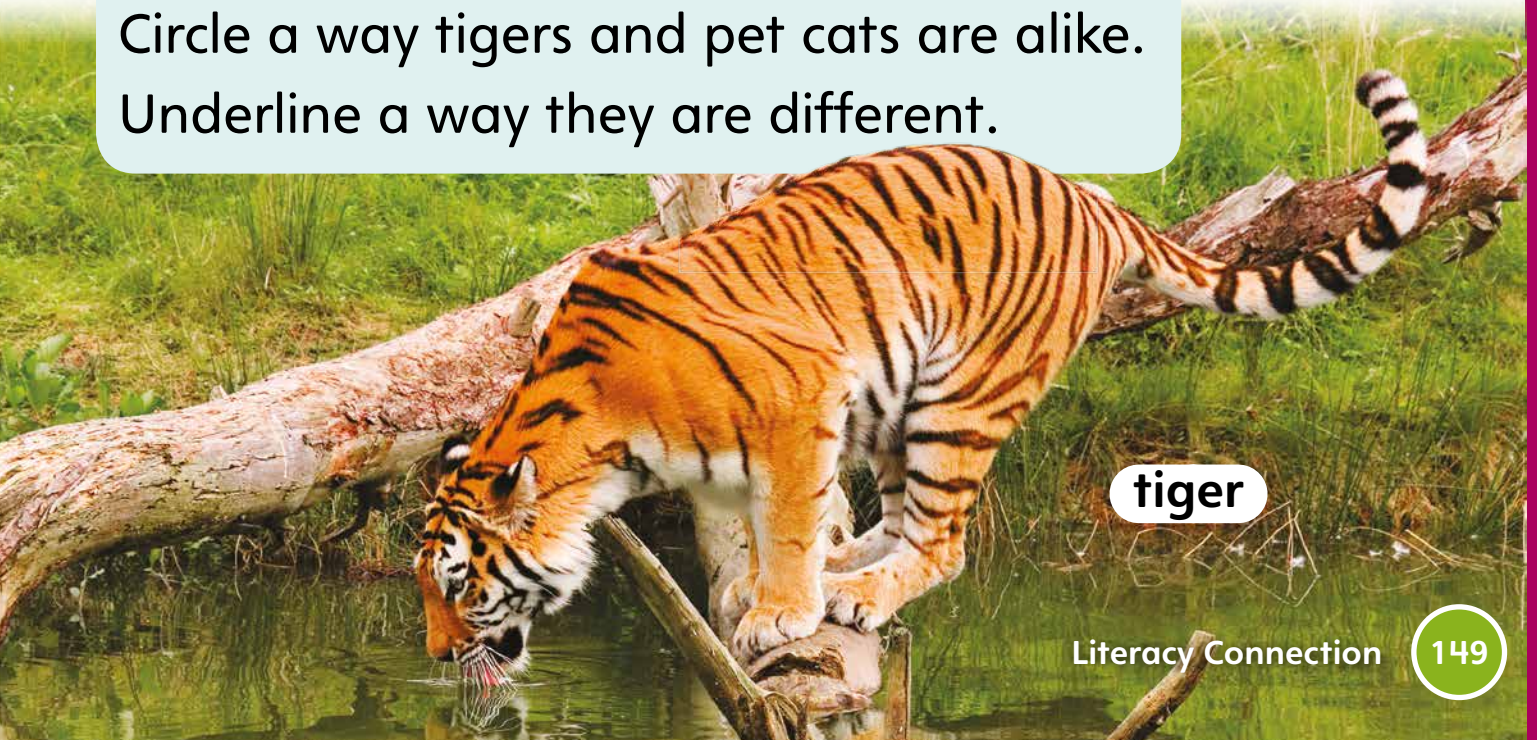


pet cat

#### Reading Check

#### Alike and Different

Circle a way tigers and pet cats are alike. Underline a way they are different.



tiger

## Lesson 1

# Needs of Plants



VIDEO

Go online to watch a video about how plants use air, water, and sunlight to grow.

### Vocabulary

survive  
pattern

I can tell what plants need to survive.

K-LS1-1

### Jumpstart Discovery!

How does a sunflower plant get what it needs? Act it out.

# How do **plants** get **water**?

Wildlife biologists observe plants. How can you observe a plant getting water?

## Procedure

1. Make a plan to show how water moves through a plant.
2. Predict what will happen when you put the plant in water.
3. **Observe** the flower. Record your observations on the Colored Flower Sheet.

## Analyze and Interpret Data

4. **Use Data** Tell how water moves in a plant.

### Materials

- white carnations
- water
- food coloring
- clear container
- Colored Flower Sheet
- crayons

### Science Practice

You **analyze data** when you record observations.



## Plants Need Sunlight

**Survive** means to live.

Plants need sunlight to live and grow.

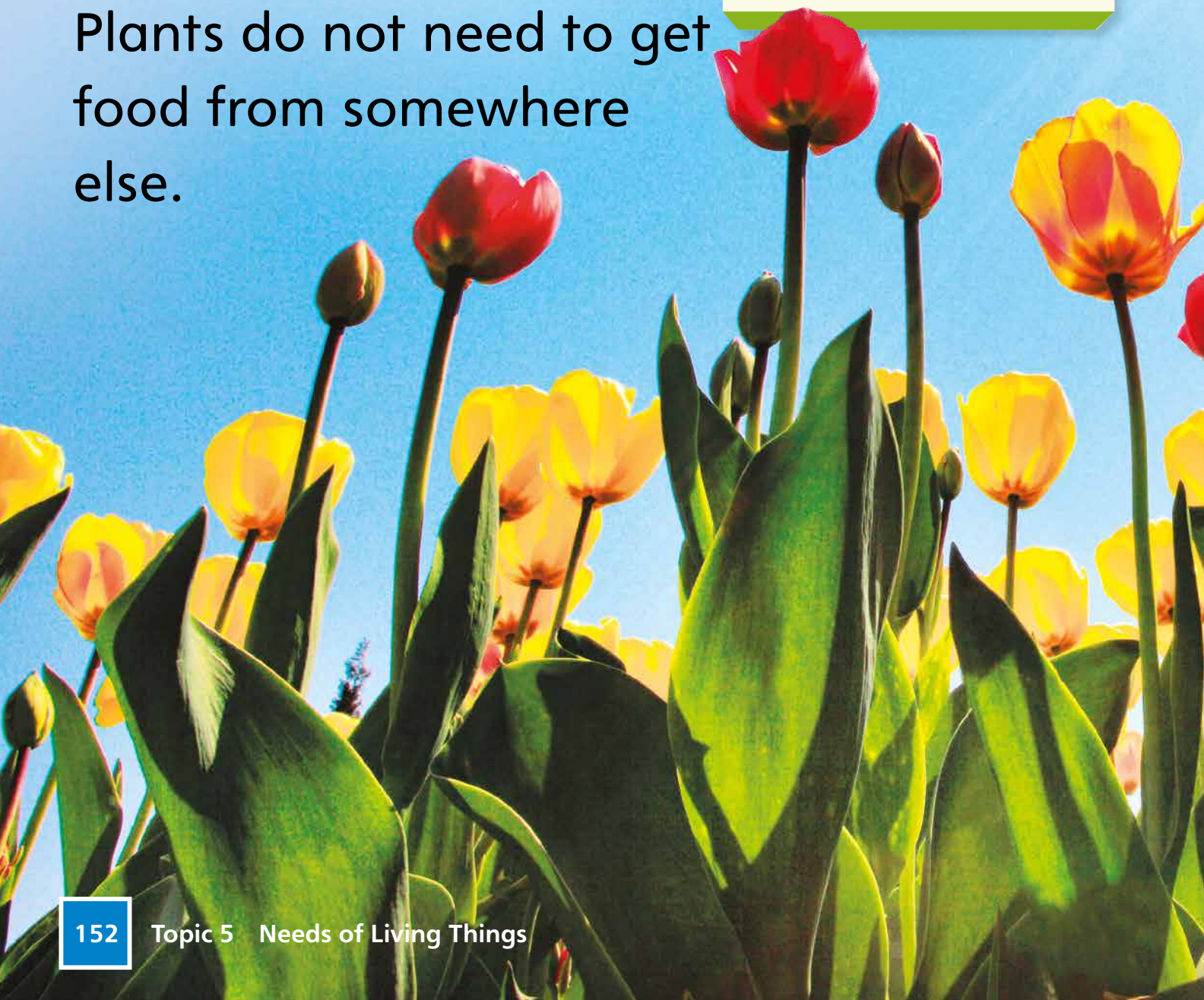
Sunlight helps plants make food.

Plants do not need to get food from somewhere else.

Crosscutting  
Concepts ▶ Toolbox



**Patterns** A **pattern** is something that is the same over and over again. What pattern do you notice about what plants need?





## INTERACTIVITY

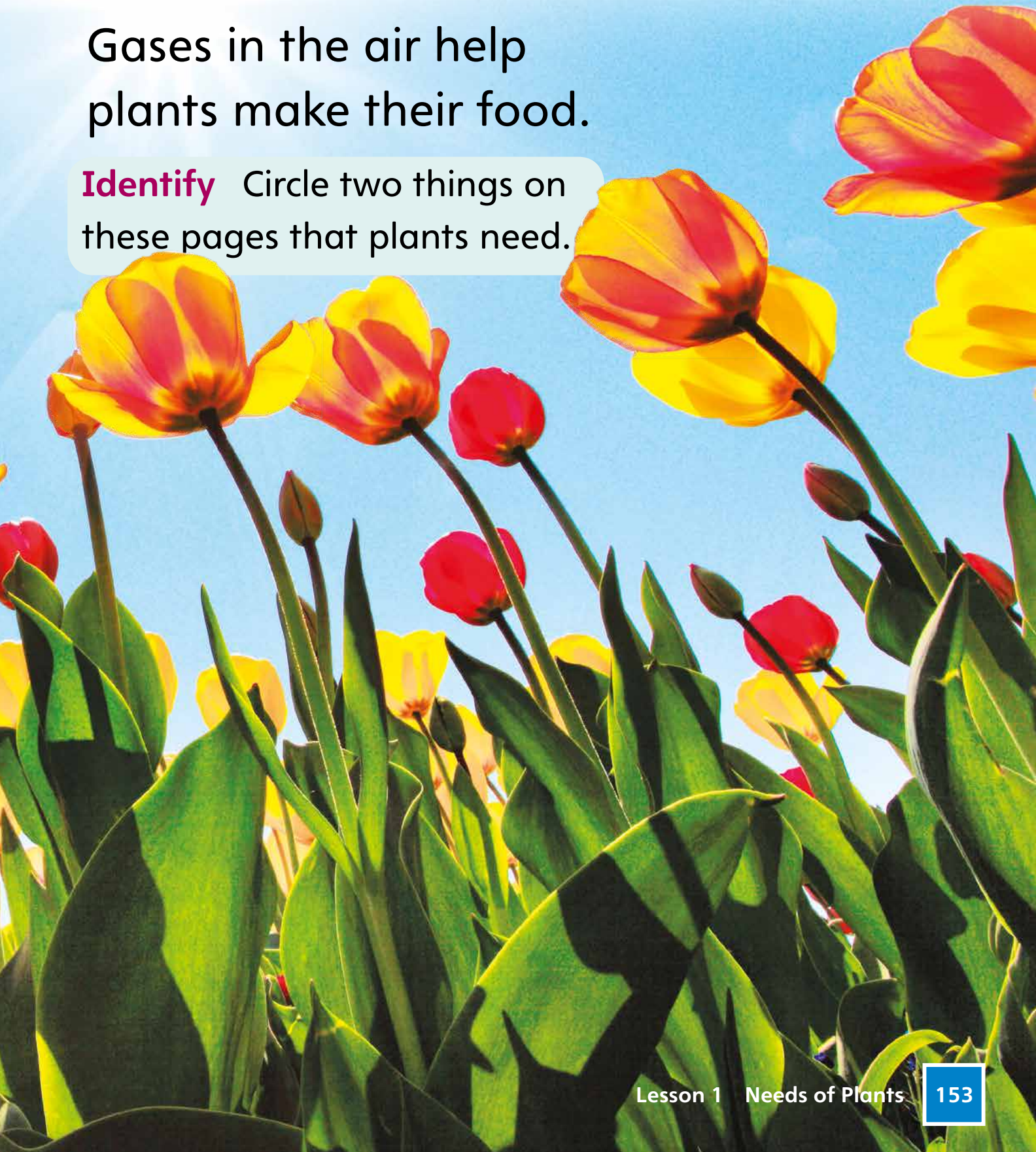
Go online to learn more about what plants need.

# Plants Need Air

Plants need air to survive.

Gases in the air help plants make their food.

**Identify** Circle two things on these pages that plants need.



## Plants Need Water

Plants need water.

Water helps plants make their food.

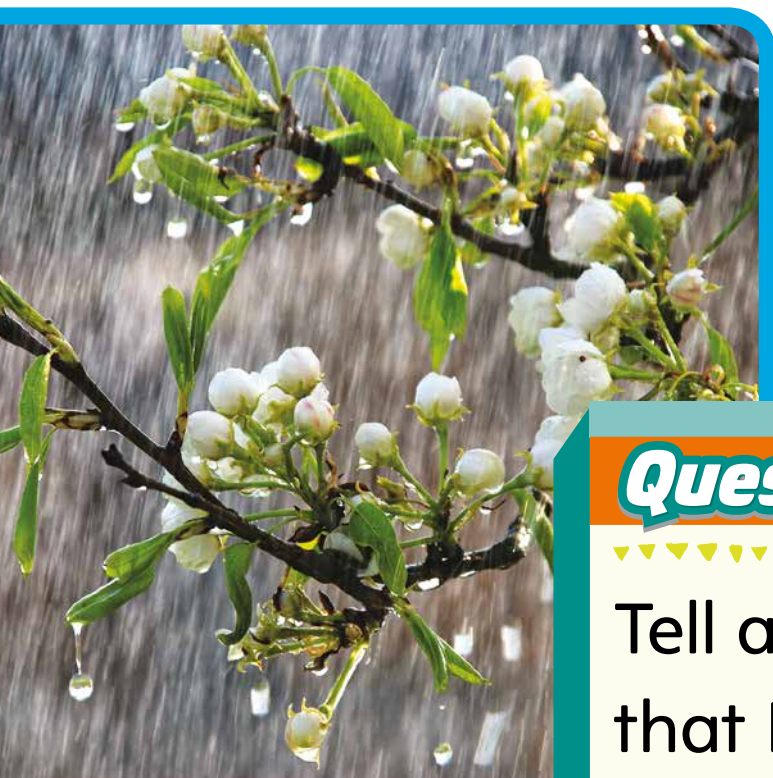
Water can come from rain.

Water can also come from people.

Literacy > Toolbox 

### Alike and Different

Circle a sentence about how plants are alike.



### Quest Connection



Tell a partner two things that Ms. Chen should put in the book.



## Quest Check-In

# Caring for Plants at the Park

Look at things that could go in the park.

**Identify** Circle the things plants will need to survive.



**Evaluate** Put an X on the things plants do not need to survive.

## Lesson 2



VIDEO

Go online to learn more about the types of food animals eat.

# Needs of Animals

## Vocabulary

gills

I can tell what animals need to survive.

K-LS1-1, K-2-ETS1-2

## Jumpstart Discovery!

Think about a bear.  
What will a bear need to live? Tell a partner.



# Which **feet** do the best **job**?

Animals need their feet to move and to get food. How can you build a model of an animal's feet?



## Materials

- felt
- construction paper
- cardboard
- tape
- glue
- crayons
- scissors
- pipe cleaners

## Procedure

1. Use the images to see how an animal's feet help them.
2. Make a plan to build a model of an animal's feet.
3. Build your model.

## Analyze and Interpret Data

- 4. Explain** How does your model animal use its feet where it lives? Tell a partner.

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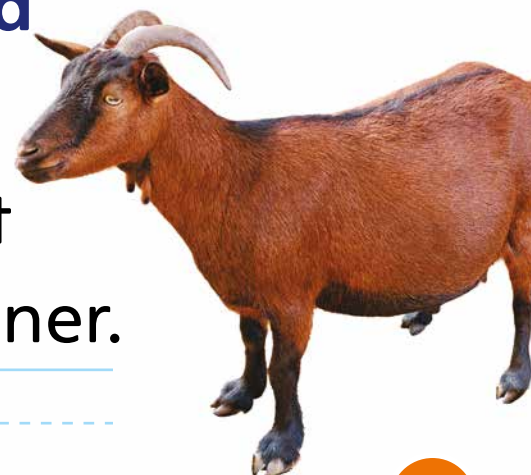


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## Science Practice

You **use models** to learn how things work.

**!** Be careful with scissors!



## Animals Need Food

Animals must eat food.  
Some animals eat plants.  
Some animals eat other animals.

Animals live where they can get the food they need.

**Identify** Put an X on a picture of something an animal eats.

Math ▶ Toolbox

**Count** How many of these animals eat plants? How many animals eat animals?





Go online to learn more about things animals need.

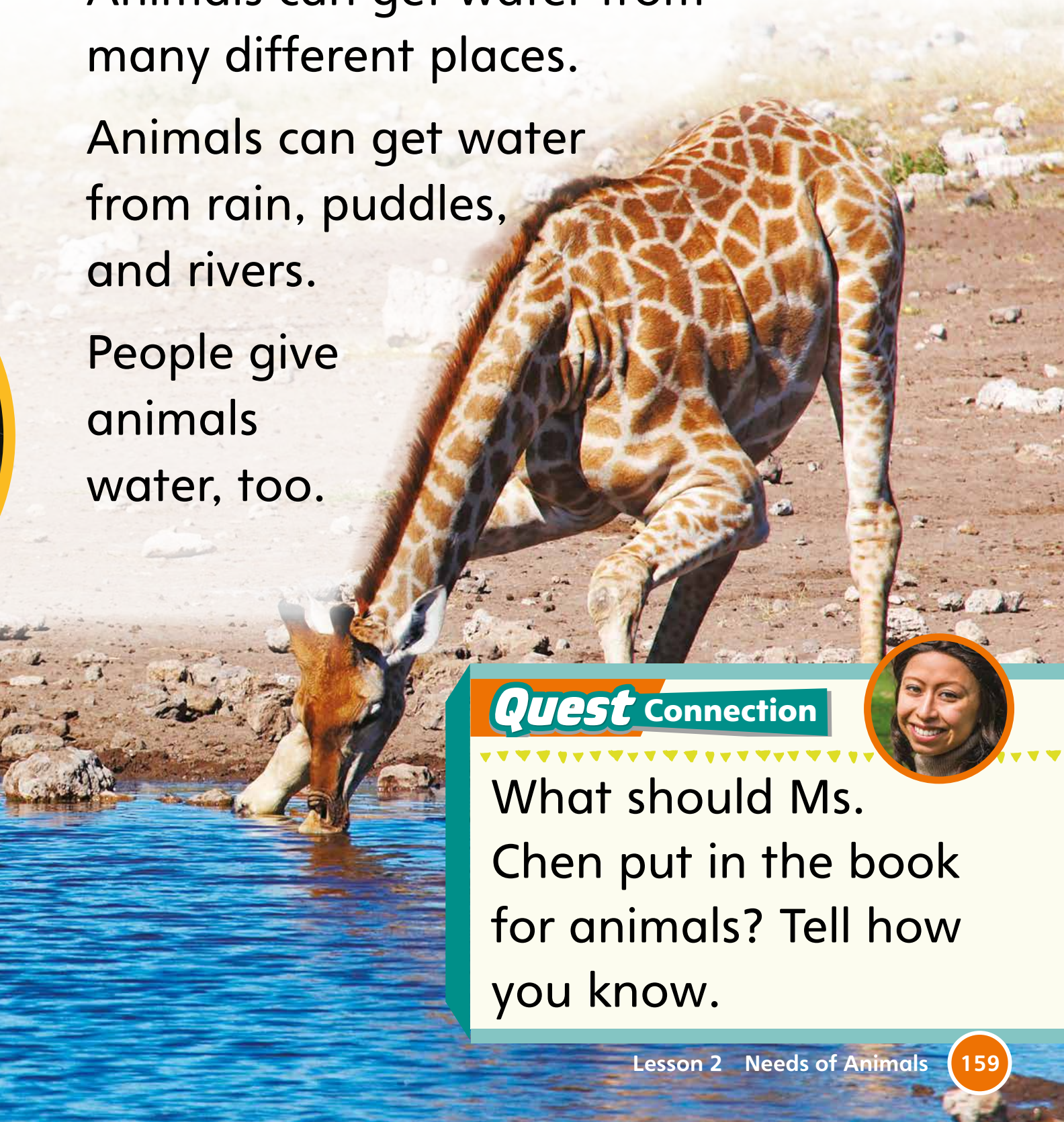
## Animals Need Water

Animals need water to survive.

Animals can get water from many different places.

Animals can get water from rain, puddles, and rivers.

People give animals water, too.



### Quest Connection



What should Ms. Chen put in the book for animals? Tell how you know.



## Animals Need Air

Animals need air to survive.

Some animals get air through their noses and mouths.

A wolf uses its nose and mouth to get air.

Fish get air through their gills.

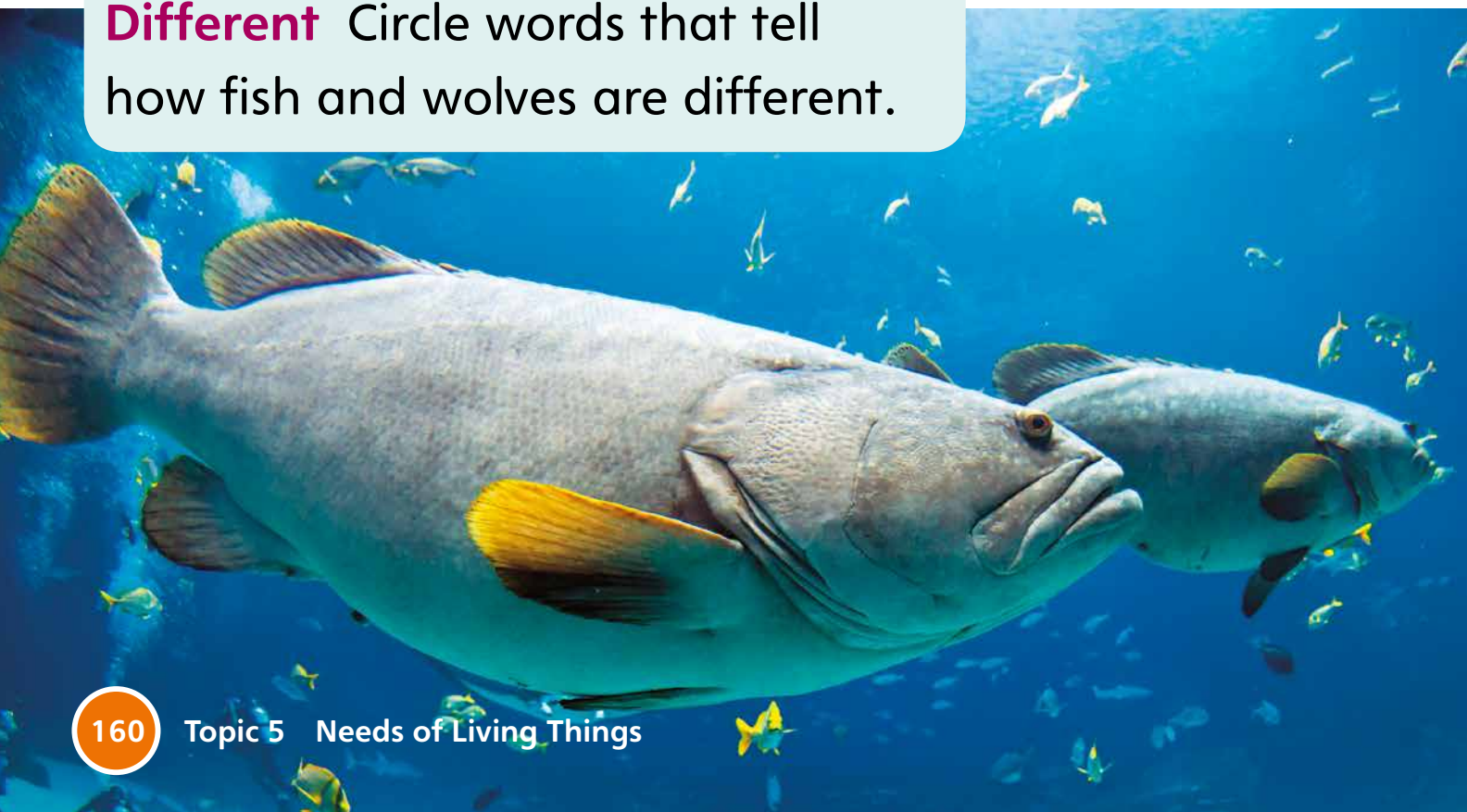
Gills take air out of the water for fish.



Reading Check

**Alike and**

**Different** Circle words that tell how fish and wolves are different.





## Fish in the Park

The town wants the park to have a koi pond.

Koi are a type of fish.

They eat many things.

They can eat worms, plants, and other fish.

Write two things the park needs for the koi fish to live.

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## INTERACTIVITY

Go online to learn more about building animal shelters.

## It Is Cold Out There!

Before a house can be built, there has to be a plan.

Architects are people who draw these plans.

Some architects plan houses for animals.

Would you like to plan a house for animals?



## Design It

Birds can get cold in the winter. Plan a house that will help keep the birds warm.

- Decide what materials to use on the outside and the inside.

- Draw what the house should look like.

## Lesson 3



VIDEO

Go online to watch a video about things that people need to live.

# Needs of People

**Vocabulary**  
shelter

I can tell what people need to survive.

K-LS1-1

**Jumpstart Discovery!**

How do you feel when you haven't eaten in a long time? Act it out.



# What should you wear?

Clothing is something people need. How do you decide what clothes to wear?

## Procedure

1. Color the clothing items. Cut them out.
2. Add them to the season you would use them.

## Analyze and Interpret Data

3. **Identify** How did the clothing you used change?  
Tell a partner.
4. **Draw Conclusions** Describe one way clothing gives you something you need.

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### Materials

- Clothing and Weather Sheet
- crayons
- safety scissors

### Science Practice

You **analyze data** to find patterns.

 Be careful with scissors!

## People are Animals

People are a kind of animal.

They need to eat plants or other animals to survive.

They need to drink water.

People need air to survive.

They breathe air in through their noses and mouths.

### Crosscutting Concepts ▶ Toolbox



**Patterns** A pattern is something that is the same over and over again. What is a pattern with humans and other animals? Underline it.

**Identify** Circle the body parts that help people breathe.



# People Need Clothes and Shelter

People wear clothes.

They use **shelters**.

Shelters are things that cover and protect.

Shelters keep people safe from the weather.



## INTERACTIVITY

Go online to learn more about things people need to live.

### Reading Check **Alike and**

**Different** Underline two words that show how people are different from other animals.

### **Quest** Connection



Tell a partner something people need to spend a day in the park. Explain why people need it.





## A Place to Sit

Shelters will be part of the park.  
Imagine it is a hot day.

**Identify** Circle items in the picture that will help people stay cool and dry on a hot day.



## Hold It In!

The water-holding frog can live in the soil for two years without eating or drinking. When it rains, it takes water in through the skin. If you squeezed the water-holding frog, water would come out!



**Infer** How do water-holding frogs survive when it does not rain for a long time?

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## Lesson 4

# Life Cycles



VIDEO

Go online to learn more about the life cycle of a salmon.

### Vocabulary

life cycle  
change  
hatch

I can understand how living things change as they go through life cycles.

K-LS1-1



### Jumpstart Discovery!

Be a newborn bird coming out of an egg. Act it out.

# How does a plant **grOW** and **change**?

How can you show how a plant grows?

## Procedure

1. Tell what a plant needs to grow.
2. Use the materials to grow a plant.
3. **Observe** your plant each day. Draw pictures to show how it changes.

Day ___	Day ___	Day ___

## Materials

- potting soil
- clear plastic cups
- marigold seeds

## Science Practice

You **make observations** to answer science questions.

## Analyze and Interpret Data

4. **Describe** Tell how the plant changes?

## Living Things have Life Cycles

Living things go through different stages of life.

These are called **life cycles**.

**Change** means to become different. All living things change during their life cycles.

When you were born, you were a little baby. Now, you are bigger.

**Identify** Draw a circle on the first part of a life cycle.





#### INTERACTIVITY

Go online to explore the life cycle of a pepper plant.

## Babies Look Different from their Parents

Many animals look different from their parents.

A newborn seal is white.

It changes color as it grows up.

 **Reading Check** **Alike and**

**Different** Circle a word that shows how newborn seals are different from their parents.



## Life Cycles Can Begin With Eggs

Some living things come from eggs.

Newborn birds **hatch**, or come out of, an egg.

A newborn penguin is gray and fuzzy when it hatches.

As it grows, its feathers will change.

A salamander lays eggs in water.

The young salamander looks very different from the adult.

It changes its shape as it grows.



**Ask Questions** Have a partner ask you a question about how young salamanders change. Try to answer it!



**Quest** Connection



What do young penguins need to grow into adults?



# How do caterpillars change?

What does the town need to do if it wants to have butterflies?



### Materials

- caterpillars
- sticks
- plants
- netted enclosure
- sugar water
- feeding pipette

## Procedure

1. Think about what caterpillars need.
2. Use the materials. Make a plan to take care of the caterpillars.

### Science Practice

You **observe** to find answers to science questions.



**!** Handle live animals with care.



3. Observe the caterpillars.  
Draw what you see.

Day ____	Day ____	Day ____

 **Analyze and Interpret Data**

4. What happened to the caterpillars?

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5. **Identify** What does the park need so that it can have many butterflies?

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Go online to learn more about what living things need.

# Let's Build a Park!

What do plants and animals need to live in a park?

These plants and animals will live in the park. What will they need?



## Show What You Found

Now, let's draw a picture of the park. You can draw the animals and the plants that will live there. Draw what they will need to survive.



## Wildlife Biologist

Wildlife biologists study living things.

They often work outdoors. They can travel to many places.

Where would you like to go if you were a wildlife biologist? Why?

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The  
Essential  
Question

What do plants and animals need to survive?

**Show What You Learned**

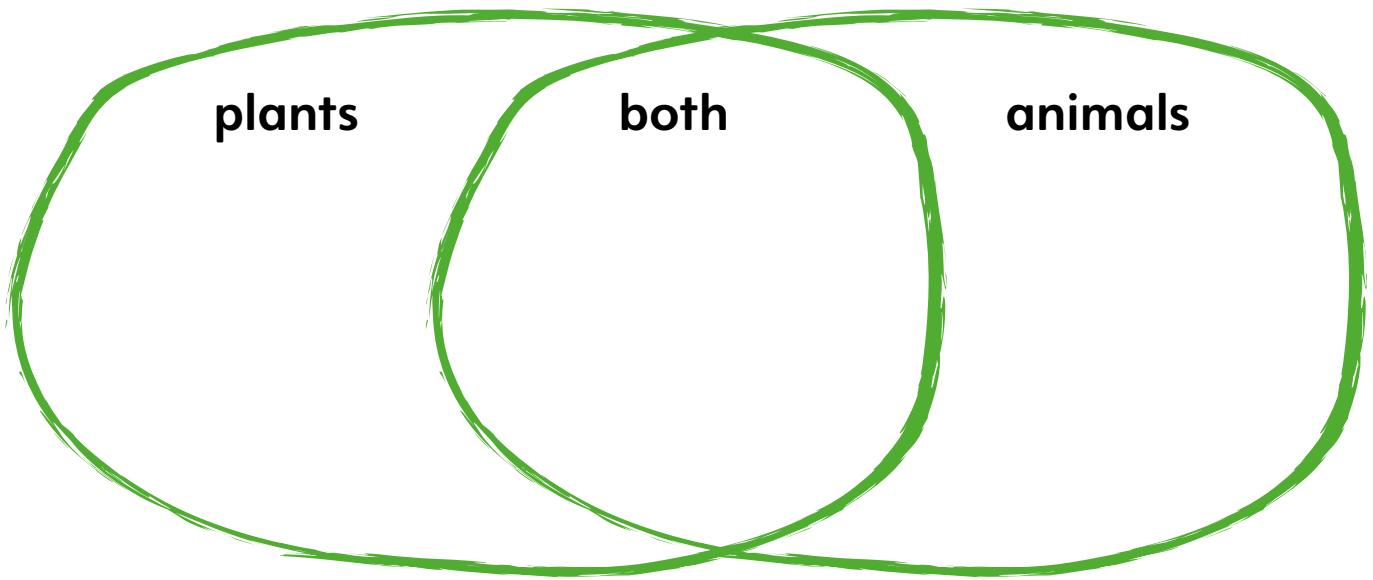
Tell what you learned about plants and animals.



1. How does a plant get food?
  - a. It makes its own food.
  - b. It eats other plants.
  - c. It eats animals.
  - d. It makes sunlight.
  
2. What is one need cats and people share?
  - a. They both need tools.
  - b. They both need sunlight.
  - c. They both need water.
  - d. They both need clothes.

3. Compare what plants and animals need to survive. Use the word bank.

water air sunlight food



4. Put the life cycle of the plant in order. Use the numbers 1, 2, 3.



Read this scenario and answer the questions.

Nora did research about some animals. She wrote what she found in this chart.

Animal	Food it Eats
bear	fish, seeds, nuts
squirrel	insects, seeds, nuts
wolf	deer, fish
deer	grass, leaves

1. How do the animals get food?
  - a. They use sunlight.
  - b. They eat living things.
  - c. They breathe it in.
  - d. They find it in a store.

2. Decide if the statement is true or false. Put a check in the correct box.

	True	False
All animals eat plants.		
Animals make their own food.		
Some animals eat the same food.		

3. What might happen if a deer and a wolf meet?

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4. According to Nora's chart, which animal eats only plants?

- a. bear
- b. squirrel
- c. wolf
- d. deer



## What **needs** do **pets** have?

You have learned that different animals have different needs. What are some needs that pets have?

### Procedure

1. Think of a pet you have or would like to have.
2. Use the books to find what the pet needs.

#### Materials

- books about pets

#### Science Practice

You **observe** to find answers to questions.



3. Record your data.  
Follow the example.

## Observations

Type of Pet	Food	Water	Shelter	Space
Snake	mice	bowl	rocks	fish tank

## Analyze and Interpret Data

4. **Compare** Show your data to another group. How are the foods of the animals alike and different?

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5. **Identify** What pattern do you see for the pets you studied?

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