

Gateways to Science

STAAR Edition



region 4[®]

Educated Solutions

Kindergarten

UNIT 6: Life Science, Part 2

Lesson 1: Animals

Learning Goal

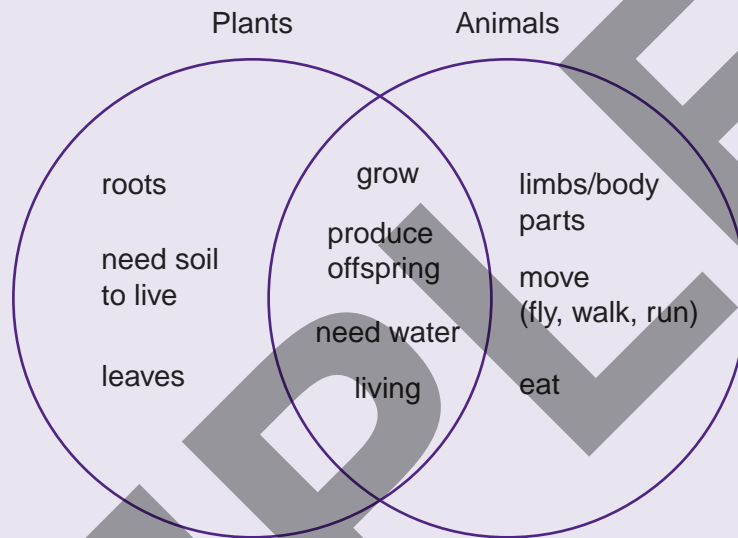
Explore the needs and physical characteristics of animals.

Materials

For teacher

- markers
- whiteboard or chart paper

Engage



Teacher Instruction

- Lead students in creating a Venn diagram to compare plants and animals.

Facilitation Questions

- What is a plant? *Accept all reasonable answers.*
- What is an animal? *Accept all reasonable answers.*
- What are the needs of a plant? *A plant needs air, water, nutrients, sunlight, and space, or room to grow.*
- What are the needs of an animal? *An animal needs air, food, water, and shelter.*
- How are plants and animals alike? *Accept all reasonable answers.*
- How are plants and animals different? *Accept all reasonable answers.*
- What are the parts of a plant? *The parts of a plant are roots, stem, leaves, and/or flower.*
- What are the parts of an animal? *The parts of an animal include a head, eyes, and limbs.*



Lesson 1: Animals

Explore

Activity 1

Advance Preparation

- Place the plastic animals (one for each student) inside the mystery cup. You will use these animals for several discussions with your students. If you are unable to locate small plastic animals, the animal photo cards can be used.
- Gather five sorting circles or prepare chart paper with circles for sorting.

Teacher Note

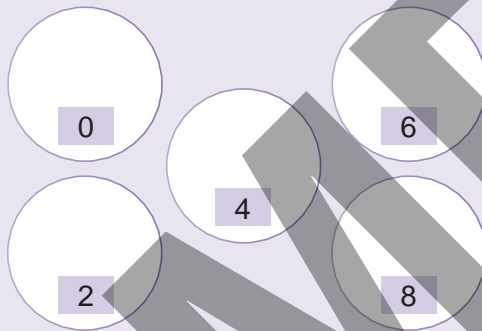
For the Explore activities, use small, plastic lifelike animals. These animals can be purchased from craft and/or toy stores or online.

Materials

Activity 1

For teacher

- marker
- sticky notes
- mystery cup from Unit 1, Lesson 2 Engage
- small plastic animals, including fish, zoo and farm animals, amphibians, birds, and insects
- sorting circles or chart paper with circles for sorting



Teacher Note

Students need to understand that animals have limbs. For this lesson, limbs are defined as arms, fins, flippers, legs, and bird wings. Activity 1 will focus on the number of legs for each animal then the number of limbs for each animal.

Teacher Instruction

- Gather students for a whole-group discussion.
- Ask: How many legs do animals have? *Animals have 2, 4, 6, or 8 legs, and some have none.* (Write each number on a sticky note to label the sorting circles.)
- Display the sorting circles and place one sticky note label in each circle.
- Pass the mystery cup to one student and instruct the student to remove one animal from the bag.
- Instruct the student to display the animal for the class, identify the animal, and tell how many legs the animal has.
- Instruct the student to place the animal on the correct sorting circle.
- Allow each student to have a turn then create a graph using the animals.
- Remove the sticky note label from one of the circles and place it in an open area. Be sure enough space exists to create a graph using all of the animals.

UNIT 6: Life Science, Part 2

Lesson 1: Animals

- Ask several students to place the animals from that circle in a line above or beside the sticky note.
- Repeat until all of the animals are represented in the graph.

Sample Graph

- 8 spider, octopus
- 6 butterflies, beetles, other insects
- 4 dog, cat, elephant, lion, cow, frog
- 2 flamingo, peacock, chicken, duck, human
- 0 whale, shark, fish

Facilitation Questions

- Do we have more animals with four legs or animals with two legs? *Answers will vary depending on the animals used for the lesson.*
- Do all animals with two legs look the same? *No, they might be different colors and different sizes.*
- How are they different? *Answers will vary depending on the animals being compared.*
- How are the legs of a/an _____ and a/an _____ different? *Answers will vary depending on the animals being compared.*

Teacher Instruction

- Ask: What are an animal's limbs? *An animal's arms, legs, wings, fins, or flippers are limbs.*

Teacher Note

For this lesson, limbs are arms, fins, flippers, legs, and bird wings. When counting fish and shark fins, you may find a shark or fish with a different number of fins than shown on the graph, graph accordingly.



Lesson 1: Animals

- Ask: If we are going to make a graph of how many limbs each animal has, which animals need to be moved to a new column? *See sample graph below for possible answers.*

10 crab

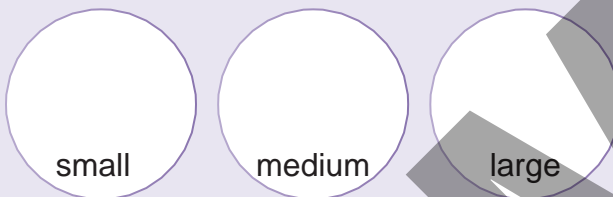
8 spider, octopus, shark

6 butterflies, beetles, other insects

4 dog, cat, elephant, lion, cow, frog, human, flamingo, peacock, chicken, duck, seal

1 whale, fish

Activity 2



Teacher Note

Activity 2 will focus on the size of each animal—small, medium, and large. If students need help identifying the animals, use the Internet and books about animals to help identify and describe each animal.

Materials

Activity 2

For teacher

- marker
- sticky notes
- mystery cup with small plastic animals from Activity 1
- three sorting circles or chart paper with circles for sorting

Teacher Instruction

- Gather students for a whole-group discussion.
- Write the word *large* on a sticky note and ask students to name some animals that are large in size. *Elephants, polar bears, cows, horses, and giraffes are examples of large animals.*
- Write the word *small* on a sticky note and ask students to name some animals that are small in size. *Mice, lizards, hamsters, hedgehogs, and insects are examples of small animals.*
- Write the word *medium* on a sticky note and ask students to name some animals that are medium in size. *Dogs, pigs, and monkeys are examples of medium-size animals.*
- Display the sorting circles and place one label in each circle.
- Pass the mystery cup to one student and instruct him or her to remove one animal from the bag.
- Instruct the student to display his or her animal for the class, identify the animal, and tell what size the animal is in real life.
- Instruct the student to place the animal in the correct sorting circle.

UNIT 6: Life Science, Part 2

Lesson 1: Animals

- Allow each student to have a turn, and then create a graph using the animals.
- Remove the sticky note label from one of the circles and place it in an open area.
- Ask students to place the animals from that circle in a line above or beside the sticky note.
- Repeat until all of the animals are represented in the graph.

Sample Graph

ant	dog	whale
butterfly	monkey	elephant
mouse	pig	giraffe
hamster	leopard	polar bear
hummingbird	eagle	horse
small	medium	large

Materials

Activity 3

For teacher

- mystery cup with small plastic animals from Explore
- marker
- sticky notes
- sorting circles or chart paper with circles for sorting

Activity 3

Teacher Note

Activity 3 will focus on the body covering (skin, scales, fur, feathers, shell, or spines) of each animal. Students may not be aware of the different body coverings animals have. Allow students to discuss the body coverings and offer the correct name for them, i.e., skin for a frog, scales for a fish, fur for a bear, etc.

For this activity, we will focus on the outermost covering of the animal. For example, hedgehogs have spines and hair. We will focus on spines for this lesson.

Teacher Instruction

- Gather students for a whole-group discussion.
- Display the sorting circles and inform students that they are going to help label the circles during the lesson.
- Pass the mystery cup to one student and instruct him or her to remove one animal from the cup.
- Instruct the student to display his or her animal for the class, identify the animal, and tell what kind of body covering the animal has in real life.
- Instruct the student to place his or her animal in a sorting circle.
- Ask the student what label should be placed in the circle, write it on a sticky note, and label the circle with the name of a body covering such as skin, fur, feathers, scales, shell, or spines.



Lesson 1: Animals

- Allow each student to have a turn and label additional circles, as needed.
- Guide students in sorting the animals by body covering, and then create a graph using the animals.

Sample Graph

duck	dog				
flamingo	leopard			human	
hummingbird	bear	angel fish	crab	elephant	
peacock	cat	alligator	snail	frog	hedgehog
woodpecker	rabbit	snake	turtle	whale	porcupine
feathers	fur	scales	shell	skin	spines

Explain

Teacher Instruction

- Read aloud *Animals* to students.
- Display the animals from the mystery cup, one at a time, using the facilitation questions to lead a discussion.

Facilitation Questions

- If you saw a live (insert name of animal), would it be large, medium, or small? *Answers will vary depending on which animal is named.*
- How does a (insert name of animal) meet its needs? *Answers will vary depending on which animal is named.*
- Does a young (insert name of animal) look like its parents? *Answers will vary depending on which animal is named.*

Teacher Instruction

- Instruct each student to draw and color a picture of his or her favorite animal from the lesson.
- Gather students to make an entry in the class science notebook about animals.

Materials

For teacher

- *Animals* student reader
- mystery cup with small plastic animals from Explore
- class science notebook
- markers

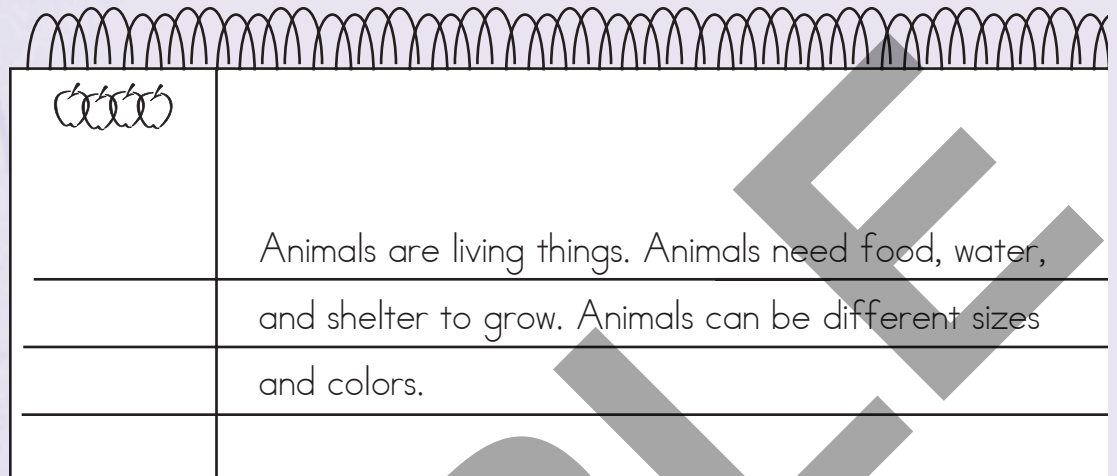
For each student


- crayons
- half-sheet of drawing paper
- pencil

UNIT 6: Life Science, Part 2

Lesson 1: Animals

- Possible science notebook entry:



	
	Animals are living things. Animals need food, water,
	and shelter to grow. Animals can be different sizes
	and colors.

Materials

For each student

- RM 1
- crayons
- liquid glue
- pencil
- scissors
- broom bristles
- toothpicks (optional)
- brown felt
- craft feathers
- plastic shopping bags
- small plastic cups
- contact paper (optional)
- small sequins

Elaborate

Advance Preparation

- Cut 5 cm x 5 cm pieces from the plastic bags, one for each student.
- Cut 5 cm x 5 cm pieces of felt, one for each student.
- Cut one piece from the small plastic cups that will cover the turtle shell.
- Cut broom bristles for each student.
- Divide the felt, feathers, and sequins for each student.
- Distribute the materials before the activity or be prepared to distribute them during the lesson.

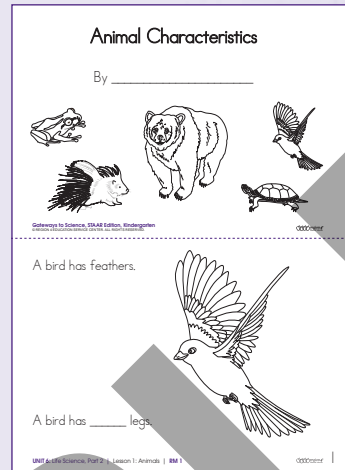
Teacher Note

The plastic cup piece may not remain glued to the page. Contact paper could also be used for the turtle shell and toothpicks could be used in place of the broom bristles for the porcupine.

Lesson 1: Animals

Teacher Instruction

- Provide *RM 1: Animal Characteristics* to students.
- Instruct students to put their names on the first page.
- Instruct students to color the animals on each page.
- Instruct students to complete each page by filling in the blank with the correct number of legs for each animal and adding a sample of the body covering of the animal. (Feathers for the bird, sequins for the fish scales, plastic bag for frog skin, felt for bear fur, toothpicks or broom bristles for porcupine quills, and plastic cup piece or contact paper for turtle shell.)
- Allow adequate time for the pages to dry.
- Instruct students to cut on the dotted line of each page and put the pages in order.
- Staple the pages together to create a book.



Evaluate

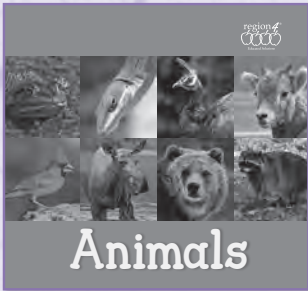
Teacher Instruction

- Instruct students to sort the animals by size, number of legs, or type of body covering.
- Observe students' work and correct any misunderstandings.

Materials

- For teacher
- plastic animals from Explore

Animals



Animals are living things.



2

Animals need food, water, and shelter to live and grow.



3

Animals eat different kinds of things.



4

Animals drink water and use water to bathe or cool off. Some animals live in water.



5

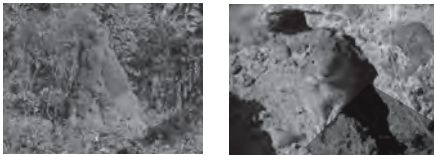


Animals live in different kinds of homes.

Some make their homes in nests.

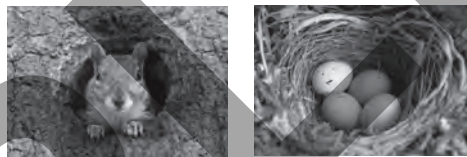


Some make their homes underground.



6

Some make their homes in trees.



Some live in homes made by humans.



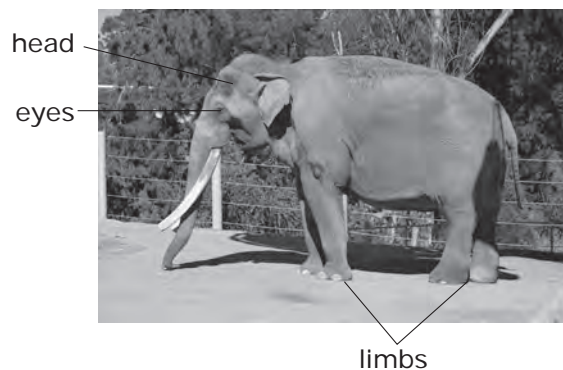
7

There are many kinds of animals.



8

Many animals have eyes, limbs, and a head.



9

Animals

Animals can be different sizes.

Some are small like a butterfly.



Some are large like an elephant.

Some are medium-sized like a monkey.



10

Animals have different body coverings. Body coverings help animals hide, protect themselves from danger, and keep warm and cool.



shell



fur



quills



feathers

11

Birds like ducks have feathers.



Fish and snakes have scales.

Crabs and turtles have shells.



12

Frogs have smooth skin,



and elephants have rough skin.

Animals like dogs and bears have fur.



13



Animals are different colors. The color of an animal can help it hide and can be a warning that the animal is harmful.



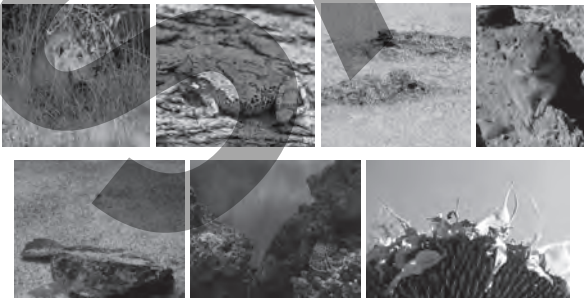
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Red, yellow, and black are colors that warn that an animal might be poisonous or may not taste good to a predator.



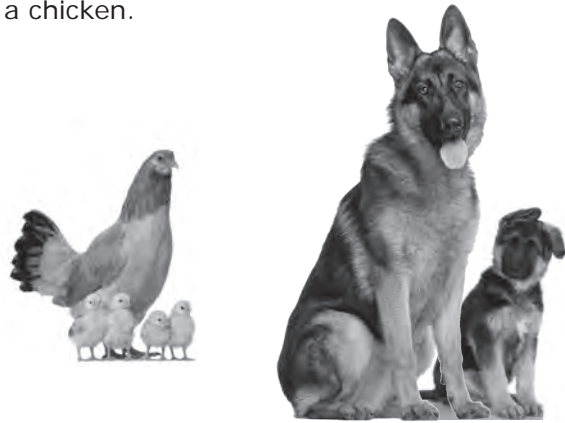
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When an animal uses its coloring to hide, we call it camouflage. Can you see the animals in the pictures?



16

Animals produce offspring. A puppy is the offspring of a dog. A chick is the offspring of a chicken.



17

Animals

A puppy needs food and water to live and grow. When the puppy grows up, it will be a dog.



18

A baby bird needs food and water to live and grow.



19

Animals are living things. They are different colors and sizes and live in different types of homes, but they all have basic needs and produce offspring.



20

