



# Pueblo VIRTUAL ZOO PROGRAMS

**Empower. Engage. Conserve.**

## What Do Animals Need?

Water - Food - Shelter - Space

A Four-part Science Literacy  
series for K - 2nd Grade:

Part 1: Mammals Need Space

Part 2: Birds Need Food

Part 3: Reptiles Need Shelter

Part 4: Amphibians Need Water



**Created with generous funding from**



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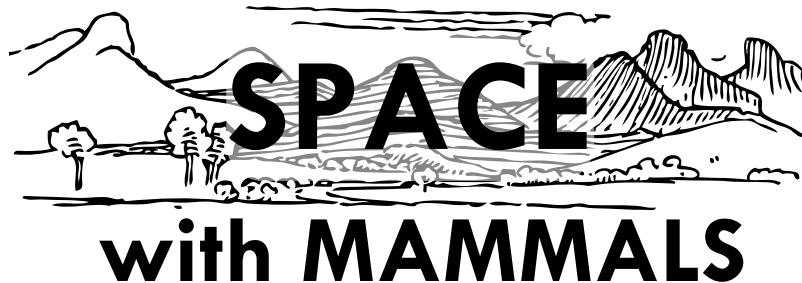
# What Do Animals Need?

*All animals need Water, Food, Shelter,  
and enough Space  
to provide those resources.*

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## Session One:

Let's explore the need for



### Objectives:

- People can share space in the environment with wildlife by providing for their needs
- Mammals have observable characteristics that are unique to them
- Mammals need water, food, shelter, and space to live
- Mammals can find everything they need to survive in nature

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## **Quick Guide to Curriculum: This program is designed to take place over 1 week**

Day One: Administer Nature Awareness Attitudinal Survey - directions pg. 6, survey pg. 10 (optional)

ENGAGE: Watch the Virtual Field Trip to the Sun Bears - [Barney, The Sun Bear](#)

Discuss video (pg. 7 for discussion questions) and hand out Sun Bear Features Coloring Sheet - pg. 12

Day Two: Go outside with students to explore.

EXPLORE: Hand out Explore Outside Scavenger Hunt sheets - pg. 13-14, Key - pg. 15-16

Day Three: Continue investigating how animals find what they need with the Prezi presentation.

EXPLAIN: Use the *Mammals Need Space* Prezi discussion prompts (pg. 17) with the *Student Handout* (pg. 18) as you watch the "Session One: *Mammals Need Space*" Prezi presentation -

[Mammals Need Space Prezi Presentation](#). You can also go through the Prezi manually here: [Prezi Presentation Slides](#). Use the Otter Map (pg. 19) to show students that otters need space near rivers.

Day Four: Watch a *Virtual Animal Presentation* here: [Glory, The Hedgehog Tenrec](#)

ELABORATE: Hand out the *Glory, the Lesser Madagascar Tenrec* maze sheet (pg. 20)

Day Five: Assess student learning.

EVALUATE: Administer the "A Squirrel Story" content assessment (pg. 21-22, instructions on pg. 8)

Administer the post-program Nature Awareness Attitudinal Survey - directions pg. 6, survey pg. 10

Enter Survey and Assessment data into table (pg. 26) and email to [acasey@pueblozoo.org](mailto:acasey@pueblozoo.org)

### **Session One: Mammals Need Space**

#### **Introduction:**

Welcome to Science Literacy Online! The focus of this program is the interaction between wildlife and the environment that allows living things to find the basic requirements they need to survive. Students will explore how people also get their essential needs met through the environment and how competition for resources can be minimized when people consider the needs of wildlife in their own built environment. In this first session, mammals will serve to illustrate the needs of wildlife – in particular the need for enough space to find adequate food, water, and shelter – while students also learn to identify characteristics that are unique to *mammals*.

#### **Pueblo Zoo Mission Objectives:**

Our mission is to “empower people to engage in conservation of animals and their natural habitat.” All of our educational programs strive to advance that goal by including activities that take place *outside* – the *Explore* activity will always include an option to explore outside. As part of this program, we ask if you will help us measure changes in children’s feelings about nature and being outside using a **Nature Awareness Attitudinal Survey** before the program and again after the program. Directions for administering the survey are included in this document. Thank you for helping us gather the data we need to make our programs more effective. Participation in the **Nature Awareness Attitudinal Survey** is, of course, totally optional.

#### **Meeting the Standards:**

##### **Colorado Science Standards:**

LS1: *To live and grow, animals obtain food they need from plants or other animals, and plants need water and light.*

Evident Outcomes: *Students can use observations to describe patterns of what plants and animals (including humans) need to survive.*

##### **Next Generation Science Standards:**

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

1-LS1-2, 2-LS4-1. *Read grade-appropriate texts and use media to obtain scientific information to determine patterns in the natural world.*

K-ESS3-2. *Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do.*

K-ESS3-3. *Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things.*

##### **NAAEE K-12 Environmental Education Standards:**

Strand 1: A. Questioning, E. Organizing and analyzing information

Strand 2.1(B): Earth’s living systems

### **Learning Objectives:**

- People can share space in the environment with wildlife by providing for their needs
- Mammals have observable characteristics that are unique to them
- Mammals need water, food, shelter, and space to live
- Mammals can find everything they need to survive in nature

### **Vocabulary:**

**Animal** – an organism that must eat plants and/or other animals to survive (a consumer)

**Plant** – an organism that produces its own food from water, sun, and carbon dioxide (a producer)

**Mammal** – an animal that is covered in FUR, has a BACKBONE, is WARM-BLOODED, and gives birth to live young that drink MILK from the mother for a period of time while they are young

**Backbone** – a series of connected bones that run from the base of the skull to the pelvis; spine

**Fur** – the fine, soft, thick, or hairy coat of a mammal, includes whiskers, quills, and manes

**Milk** – white fluid rich in fat and protein made by female mammals to feed their young

**Warm-blooded** – the ability to maintain a constant body temperature by using the energy in food to create body heat and processes like shivering and sweating to maintain it at a certain, characteristic temperature, such as 98.6 degrees for humans

**Shelter** – any protected place where an animal can be safe from predators and weather, such as a nest, a burrow, a cave, a tree cavity, or a den in any other safe place

**Nocturnal** – animals that are active at night

### **Conservation Action: End Littering with Keep America Beautiful (kab.org)**

For Session 1: Mammals Need Space, the emphasis is on sharing our built environment with wildlife. Habitat loss is one of the most common threats to wildlife. People can mitigate this loss by providing for wildlife in their own spaces – schools, parks, and residential areas.

*Keep America Beautiful* is one of this nation's first conservation efforts aimed at getting children involved in responsible environmental action. Established in 1953, they eventually adopted the canine TV star, Lassie, as their mascot for the anti-littering campaign. Even young children can understand the problems of littering and contribute to the effort to "Put Waste in its Place". You can visit the KAB educational resources page, <https://kab.org/education/waste-in-place/>, for more ideas about keeping community space clean and safe for wildlife.

**NGSS/CDE Standard in Life Science:** *K-ESS3-3. Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.*

**North American Association of Environmental Educators Guidelines for Excellence:** *Strand 2: Environmental Processes and Systems, 2.2-Human Systems, A. Individuals, groups and societies – Learners generate examples of how people act, as individuals, as members of a group, and as members of society, toward the environment.*

## What Do Animals Need?

### Getting Ready

#### Nature Awareness Attitudinal Survey

To help Pueblo Zoo assess the impact of their programming on students' feelings about the outdoors, please administer the **Nature Awareness Attitudinal Survey**.

1. Use the Participant Sheet to record the students' names and assign them a number. This sheet will stay with the teacher and only serve to keep the pre- and post-surveys for each student paired up. The roster can be discarded at the end of the program.
2. Record the student's roster number on their Nature Awareness Survey
3. The teacher will read the following directions to the students before administering the survey:
 

"You are going to answer five questions about how you feel about nature and the outdoors. I will say something about nature and you will decide how you feel about what I say. You will use the faces to show me how you feel by putting a circle around one, *and only one*, of the five faces for each of the things I say.

While I talk about the faces now, I want you to put your finger on the face that I am talking about. Okay, let's get started: Put your finger on the really unhappy face at the beginning of the row. That one means you don't agree at all with what I say.

Put your finger on the sort of sad face now. It means you sort of do not agree with what I say.

Now put your finger on the face in the middle of the row - the one that has a flat line for a mouth. That face means that you are not really sure how you feel about the statement that I read.

Now put your finger on the smiley face next to it that is smiling, but just a little smile. That face means you sort of like what I say.

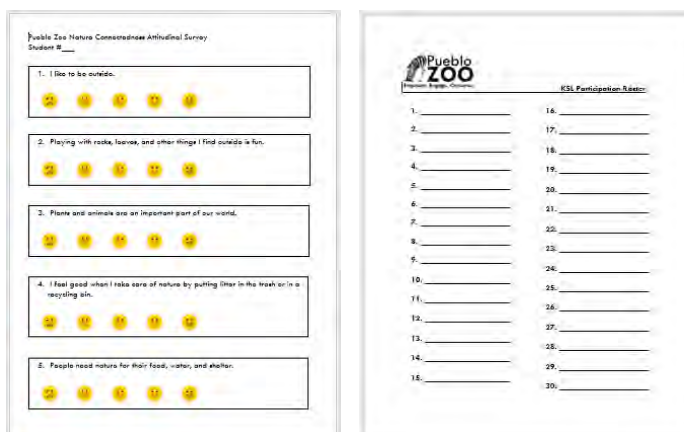
Finally put your finger on the big smiley face at the far end of the row. That one means you really like with what I say.

Let's try an example: Use your finger to touch the circle that shows how you feel when I say this: 'I like to eat ice cream.'"

Now the teacher can ask the students which face they chose to check if they are understanding what to do and if it matches with how they really feel about eating ice cream.

When everyone is ready, the teacher will read the statements on the **Nature Awareness Attitudinal Survey** and the students will circle the face which best fits how they feel.

Please record the results of the pre- and post-survey in the table provided, scan it, and send to [acasey@pueblozoo.org](mailto:acasey@pueblozoo.org). Thanks for helping us assess the effectiveness of our programs!



The image shows two forms side-by-side. The left form is the 'Pueblo Zoo Nature Awareness Attitudinal Survey' with five questions and five faces each. The right form is the 'K-5L Participant Roster' with two columns of numbered lines for recording student names and roster numbers.

## **The 5E Model of Instruction**

The 5E Model, developed in 1987 by the Biological Sciences Curriculum Study, promotes collaborative, active learning in which students work together to solve problems and investigate new concepts by asking questions, observing, analyzing, and drawing conclusions.

(<https://lesley.edu/article/empowering-students-the-5e-model-explained>)

Learn more with Edutopia: ["How to Use the 5E Model in Your Science Classroom"](#)

### **Link to Videos:**

Engage/Virtual Field Trip: [Barney, the Sun Bear](#)

Explain/Prezi presentation: [Mammals Need Space Prezi Presentation](#)

Link to Prezi presentation: [Prezi Presentation Slides](#)

Elaborate/Animal presentation: [Glory, The Hedgehog Tenrec](#)

### **ENGAGE (5-minute video and ~10 minutes of discussion):**

Watch the Virtual Field Trip to the Sun Bear Exhibit, to engage students' interest in mammals:

The video of the Virtual Field Trip is accessible through the link in the Teacher Guide and in the section above, "Link to Videos". An educational student coloring sheet from the Bornean Sun Bear Conservation Centre (BSBCC) is also included in this Teacher Guide on page 12.

Our zookeeper, Gina, talks about our Sun Bear, Barney. He is a long-time resident of the zoo and, at over 30 years old, one of the oldest Sun Bears in human care.

For more information about Sun Bears, go to: <https://www.bsbcc.org.my/sun-bear-facts.html> .

After the video, ask your students the following questions. Listen to their answers and expand on them with this information:

1. Why do Sun Bears have such big claws?  
Sun Bears use their claws to break apart dead logs to find insects to eat. They are also great climbers and use their claws to hang on to tree trunks as they climb. In Malaysia, where they live, they are called *basindo nan tenggil* which means "he who likes to sit high".  
How is that like people? How is it different?
2. What do Sun Bears eat?  
Sun Bears are OMNIVORES which means they eat both plant and animal matter. They like to eat all kinds of insects, fruit, sap and – their favorite – honey!  
How is that like people? How is it different?
3. Where do Sun Bears live?  
Sun Bears live in tropical forests in SE Asia. They make nests out of leaves, grass and twigs under trees in the forest. Sometimes they even make their nests *in* the trees. They like to rest or sunbathe in their nests.  
How is that like people? How is it different?
4. What do Sun Bears drink?  
Sun Bears live in humid, rainy forests. They drink water from streams and lakes. They can even swim!  
How is that like people? How is it different?



### EXPLORE OUTDOORS (30 minutes or more):

Pueblo Zoo promotes outdoor play and exploration. Try learning about nature outside with this Explore Outside scavenger hunt. If you are online, send this PDF to your students and allow them to talk about what they think living things need when you meet. Emphasize that all living things need water, but only animals need to eat. Plants do not eat because they get all the energy they need from the sun. The pdf's can be found on pg.13-14 of this Teacher Guide.



**EXPLAIN (15 - 20 min.):** Watch the *Mammals Need Space Prezi* presentation video:

[What Do Animals Need? Session One: Mammals Need Space](#)

(You can also go through the presentation manually with this link: [Prezi Presentation Slides](#)) Use the Discussion Prompts that go with the Prezi to keep students involved in the narrative by pausing at the appropriate topic to gauge comprehension and motivate inquiry. The Discussion Prompt sheets can be found on pages 17-18 of this Teacher Guide.

**ELABORATE (10 min.):** Watch the Virtual Animal Presentation: [Glory, the Hedgehog Tenrec](#)

Now that students understand the four needs of all living things, have them consider how tenrecs in the wild get water, food, shelter and space. You can learn more about Lesser Madagascar Hedgehog Tenrecs at the National Zoo: <https://nationalzoo.si.edu/animals/lesser-madagascar-hedgehog-tenrec>. Students will enjoy guiding Glory through a maze to get to her little home in the tree with the handout on page 20 of this Teacher Guide.

### EVALUATE (10 min):

Teachers will use “A Squirrel Story” to assess content mastery for this program.

The teacher and students will read the “picture story” together (page 21) :

“The squirrel climbed a tree.

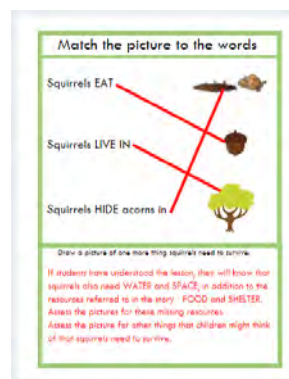
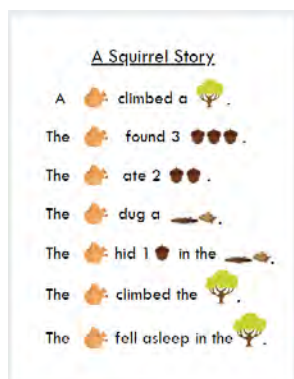
The squirrel found 3 acorns.

The squirrel ate 2 acorns.

The squirrel dug a hole. The

squirrel hid 1 acorn in the hole. The squirrel climbed the tree. The squirrel fell asleep in the tree.”

The teacher will then lead a discussion about squirrels, drawing on the parts of the program that the children have just participated in. Evaluation should take place within a day following the program, ideally right after the program ends.



After reading and discussing the story, ask the students to take the assessment (page 22) by reading the starts to the three sentences and allowing the student to finish the sentence by drawing a line to the correct picture. Say:

“I am going to read the beginning of a sentence and I want you to finish it by drawing a line from the words I read to the picture that best finishes the sentence. I do not want you to SAY what you think is the end of the sentence out loud please. I will begin with the first sentence which is on the top of the page. Let's begin: ‘Squirrels eat...’, now draw a line to the picture of what squirrels eat.” Continue in this manner for the next two sentences. Now ask the students to draw other things that squirrels need in the box with the squirrel at the bottom of the page.

*Please record the results of assessments in the form provided on page 26. Thanks!*



**EXTENSION (20 min.):** Extension activities help reinforce concepts. For the Kindergarten Science Literacy Online Program, we recommend books that are available *online* as e-books (many of them are narrated). *The Tale of Peter Rabbit* by Beatrix Potter is a classic story for K-2<sup>nd</sup> children. In this story the author gives human traits to the rabbits in the Rabbit family – Mrs. Rabbit and her four children, Flopsy, Mopsy, Cotton-tail, and Peter. But Beatrix Potter also adheres to many true characteristics of rabbits. For instance, the family lives “in a sand-bank, underneath the root of a very big fir-tree.” It is a fun activity for the children to read the story and then talk about what is REAL about rabbits and what is MAKE-BELIEVE. You can find this book in the digital collection at [pueblolibrary.org](http://pueblolibrary.org).

## **Further Resources**

- 1) National Wildlife Federation Garden for Wildlife:  
Kindergarten students develop compassion and empathy when they interact with animals. They will be motivated to try to help wildlife. The National Wildlife Federation has an excellent program to help schools and families improve the way they share the earth with wildlife called NWF Garden for Wildlife. Children can work together with their class or family to satisfy all the requirements to make their school grounds or backyard or apartment grounds become a Certified Wildlife Habitat: [https://www.nwf.org/-/media/PDFs/Garden-for-Wildlife/Certified-Wildlife-Habitat/NWF\\_Garden-Certification-Checklist.ashx?la=en&hash=FFAA30B3AE06687A881FC4BE615DEFB0E2BACF42](https://www.nwf.org/-/media/PDFs/Garden-for-Wildlife/Certified-Wildlife-Habitat/NWF_Garden-Certification-Checklist.ashx?la=en&hash=FFAA30B3AE06687A881FC4BE615DEFB0E2BACF42)
- 2) Share pictures of your habitat with the Pueblo Zoo on their website at: <https://www.pueblozoo.org/plantgrowfly>
- 3) National Wildlife Foundation Garden-Certification-Checklist: [https://www.nwf.org/-/media/PDFs/Garden-for-Wildlife/Certified-Wildlife-Habitat/NWF\\_Garden-Certification-Checklist.ashx?la=en&hash=FFAA30B3AE06687A881FC4BE615DEFB0E2BACF42](https://www.nwf.org/-/media/PDFs/Garden-for-Wildlife/Certified-Wildlife-Habitat/NWF_Garden-Certification-Checklist.ashx?la=en&hash=FFAA30B3AE06687A881FC4BE615DEFB0E2BACF42)
- 4) Generation Wild’s list of *100 Things To Do Before You’re 12*: [https://uploads-ssl.webflow.com/5cd438328d2d773733cb4b4b/644bd221fab44edaeaf8c72a\\_Generation-Wild-100-Things-List\\_ENG.pdf](https://uploads-ssl.webflow.com/5cd438328d2d773733cb4b4b/644bd221fab44edaeaf8c72a_Generation-Wild-100-Things-List_ENG.pdf)
- 5) Generation Wild’s list of *100 Things To Do Before You’re 12* in Spanish: [https://uploads-ssl.webflow.com/5cd438328d2d773733cb4b4b/6453d407ee2e86e66df3fc2c\\_Generation-Wild-100-Things-List-SP.pdf](https://uploads-ssl.webflow.com/5cd438328d2d773733cb4b4b/6453d407ee2e86e66df3fc2c_Generation-Wild-100-Things-List-SP.pdf)
- 6) Nature and Child Network’s Benefits of Outdoor Play Infographics: [https://www.childrenandnature.org/wp-content/uploads/2015/03/CNN\\_2016GSY\\_Play\\_23-3-24.pdf](https://www.childrenandnature.org/wp-content/uploads/2015/03/CNN_2016GSY_Play_23-3-24.pdf) and [https://www.neefusa.org/sites/default/files/resources/children\\_nature\\_new\\_logo.pdf](https://www.neefusa.org/sites/default/files/resources/children_nature_new_logo.pdf)
- 7) Find fun ideas for outdoor play with National Wildlife Federation’s Green Hour initiative: <https://thegreenhour.org/> and <https://thegreenhour.org/activity/>

*Thank you for learning about the natural world with the Pueblo Zoo!*

# Pueblo Zoo Nature Awareness Attitudinal Survey

Student #\_\_\_\_

1. I like to be outside.



2. Playing with rocks, leaves, and other things I find outside is fun.



3. Plants and animals are an important part of our world.



4. I feel good when I take care of nature by putting litter in the trash or in a recycling bin.



5. People need nature for their food, water, and shelter.



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. \_\_\_\_\_

# Distinct Sun Bear Features

Sun bears are known for their **golden crest** on their jet black fur, their **long tongue** and **sharp claws** they use for tree climbing!





Name \_\_\_\_\_

# What Do Mammals Need?

## What Do Living Things Need?

Think about what living things need. What do they need to stay alive? What does GRASS need? What do RABBITS need? What do PEOPLE need? Turn over this sheet and try to find the things in the Explore Outside scavenger hunt. Write an "A" in the white box if the thing is ALIVE. Write "NA" if the thing is NOT ALIVE. How many did you find?



Blue Grama Grass

Water? \_\_\_\_\_

Shelter? \_\_\_\_\_

Food? \_\_\_\_\_



Cottontail Rabbit

Water? \_\_\_\_\_

Shelter? \_\_\_\_\_

Food? \_\_\_\_\_



People

Water? \_\_\_\_\_

Shelter? \_\_\_\_\_

Food? \_\_\_\_\_









Name \_\_\_\_\_

# What Do Mammals Need?

## What Do Living Things Need?

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Water? Yes, grass needs water.

Shelter? No

No, plants make food  
Food? from the sun.



Water? Yes, rabbits need water.

Yes, rabbits need shelter.  
Shelter? The live in burrows.

Yes, rabbits need food.  
Food? They eat grass.



Water? Yes, people need water.

Shelter? Yes, people need shelter.

Food? Yes, people need food.



**A**

**TREE**

**A/NA**

**LEAVES**

**NA**

**SIDEWALK**

**A**

**SQUIRREL**

**A**

**GRASS**

**A**

**BIRD**

**A**

**ANT**

**NA**

**ROCK**





## Session One: Mammals Need Space Prezi Discussion Prompts

### **First Prompt:**

After viewing the "What is a Mammal" topic, ask students to think of a FURRY animal - a MAMMAL - that lives in a tree. Some typical answers would be squirrels, monkeys, possums, or raccoons. If a student says a bird (or another animal that is not a mammal), ask the student if a bird has FUR and discuss that characteristic of MAMMALS. Students can draw their animal in the tree picture.

### **Second Prompt:**

After the topic, "What Do Mammals Need?", ask the students to think about what kind of food is available for rabbits in nature. Lots of students will say rabbits eat carrots because that is what they see in cartoons and literature. Actually rabbits eat a lot grass. Carrots are a treat, like dessert. Rabbits also like dandelions and clover. Students can draw some food for the rabbit on their sheet.

### **Third Prompt:**

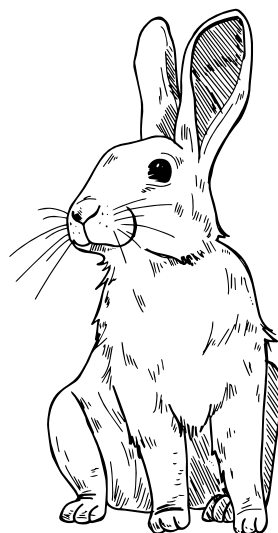
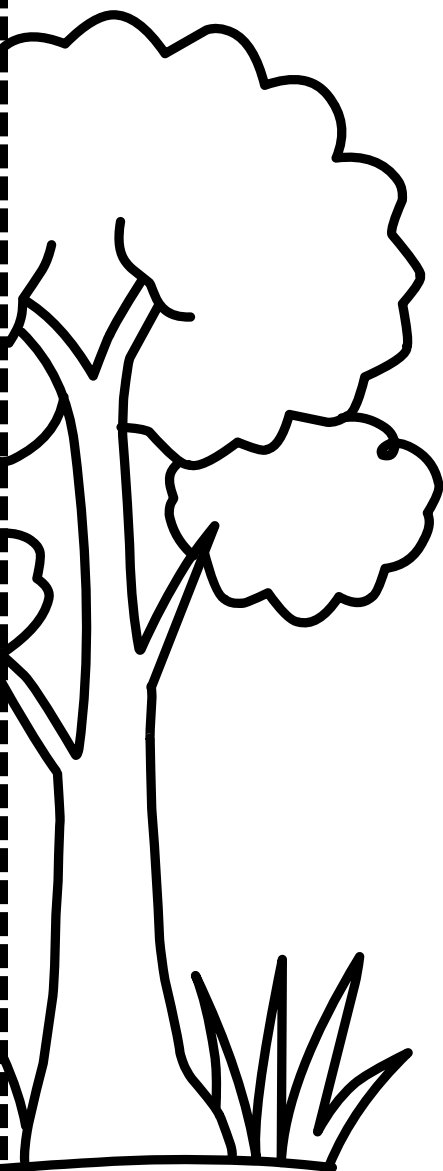
After the "Space" topic, ask students to think about where otters live. Can they live in the city? What do they need? They eat fish, so they need to live near water, especially rivers and lakes that have fish. You can look at a map of otter sightings with your students and observe that all of the yellow dots which represent otters fall on the blue lines that represent rivers. Let students draw an otter on the river picture. You can read the description of an otter on the "Have You Seen an Otter?" page while students draw. (<https://cpw.state.co.us/PublishingImages/Research/Mammals/River-Otter/ROObservationsARatings.jpg>)

### **Fourth Prompt:**

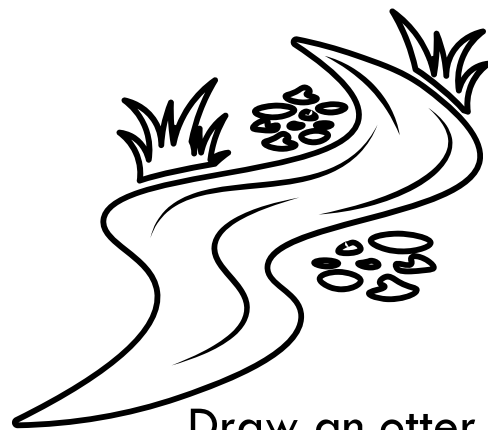
After the "How Can I Help?" topic, let students share their thoughts about litter. Ask them to look at the litter in the picture of the neighborhood and decide which pieces of litter can be recycled or composted. Some of the trash could have been avoided. Help students think about alternatives to single-use-plastic, like plastic straws. Then let them "put waste in its place" by drawing a line from the trash to the appropriate bin.

My name is \_\_\_\_\_

Who lives in a tree?

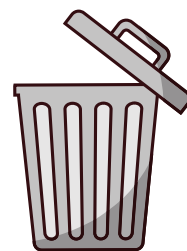


What does this  
rabbit eat?



Draw an otter  
in the river.

Clean up the town. Put the trash in the can  
by drawing a line from the trash to the can.



## Have You Seen an Otter?

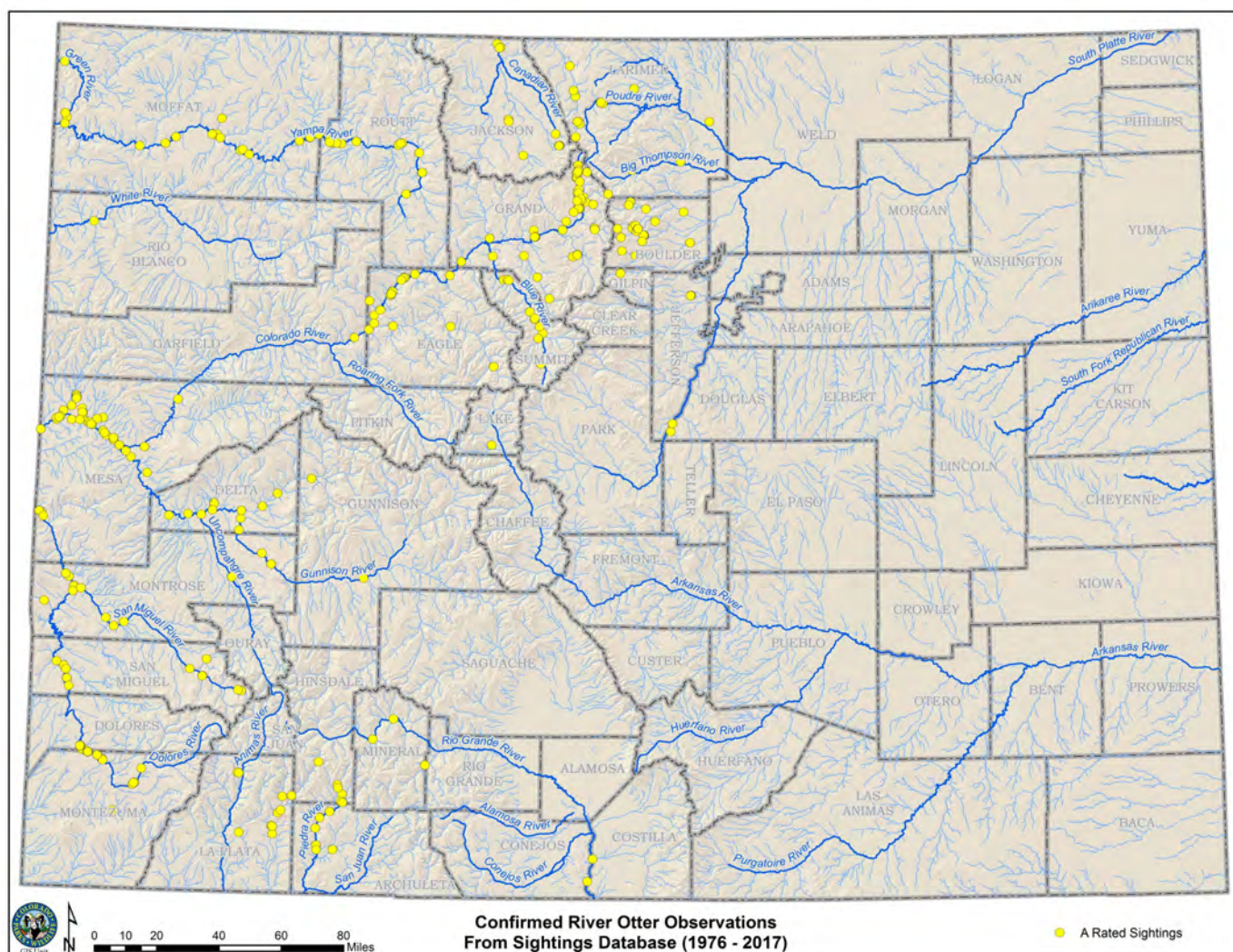
Colorado Parks and Wildlife would like to know! They are managing a citizen science effort to learn about the otters in our state and where they are living. If you see an otter, fill out an Otter Sighting form here:

<https://cpw.state.co.us/learn/Pages/RiverOtterObservationForm.aspx>. Otters are Threatened in Colorado.

To learn more about otters, visit: <https://cpw.state.co.us/learn/Pages/SpeciesProfiles.aspx?species=otter>.

River otters are semi-aquatic members of the weasel family. Some of their defining features include:

- Long, torpedo-shaped bodies
- Short legs
- A short snout
- Small, round ears
- Light to dark brown fur that can appear almost black when wet, and a silver-brown underbelly
- Weight between 15 and 25 lbs
- Length of 3 to 4 1/2 feet from their nose to the tip of their long furry, cylindrical tail
- A thick, muscular tail that tapers toward the tip, and comprises about one-third of their total length at 12-17 inches



<https://cpw.state.co.us/PublishingImages/Research/Mammals/River-Otter/ROObservationsARatings.jpg>

My name is \_\_\_\_\_

### Glory, the Lesser Madagascar Tenrec

It's morning and Glory has to go to sleep. Help her get to the hole in the tree trunk where she will curl up and go to sleep. How many mealworms will she collect along the way? How many will be leftover for later?





Name \_\_\_\_\_

# What Do Mammals Need?

## A Squirrel Story

A  climbed a  .

The  found 3    .

The  ate 2   .

The  dug a  .

The  hid 1  in the  .

The  climbed the  .

The  fell asleep in the  .

Name \_\_\_\_\_

Match the picture to the words:

Squirrels EAT



Squirrels LIVE IN



Squirrels HIDE acorns in



Draw a picture of one more thing squirrels need to survive:





Match the picture to the words:

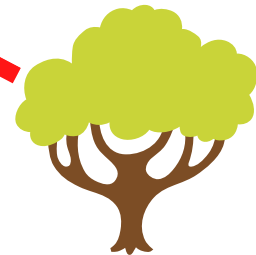
Squirrels EAT



Squirrels LIVE IN



Squirrels HIDE acorns in



Draw a picture of one more thing squirrels need to survive:

If students have understood the lesson, they will know that squirrels also need WATER and SPACE, in addition to the resources referred to in the story - FOOD and SHELTER.

Assess the pictures for these missing resources.

Assess the picture for other things that children might think squirrels need to survive, such as parents, friends, or toys.

Young children tend to think about what they need.

## CDE and NGSS Program Alignment

### **ENGAGE:**

#### Science and Engineering Practices:

1st-2nd: Read grade-appropriate texts and use media to obtain scientific information to determine patterns in the natural world. (1-LS1-2), (2-LS4-1)

#### Disciplinary Core Ideas:

Kinder: Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do. ((K-ESS3-2)

Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. (K-ESS3-3)

1st: All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp, objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. (1-LS1-1)  
Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. Plants also respond to some external inputs. (1-LS1-1)

2nd: There are many different kinds of living things in any area, and they exist in different places on land and in water. (2-LS4-1)

### **EXPLORE:**

#### Science and Engineering Practices:

Kinder: Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-LS1-1)

1st - 2nd: Scientists look for patterns and order when making observation about the world. (1-LS1-2), (2-LS2-1)

#### Disciplinary Core Ideas:

Kinder: All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow. (K-LS1-1)

1st: All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp, objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. (1-LS1-1)

2nd: There are many different kinds of living things in any area, and they exist in different places on land and in water. (2-LS4-1)

Plants depend on water and light to grow. (2-LS2-1)

### **EXPLAIN:**

#### Science and Engineering Practices:

K-2nd: Scientists look for patterns and order when making observation about the world. (K-LS1-1), (1-LS1-2), (2-LS2-1)

#### Disciplinary Core Ideas:

Kinder: All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow. (K-LS1-1)

Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do. ((K-ESS3-2)

Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. (K-ESS3-3)

## CDE and NGSS Program Alignment

### **EXPLAIN (con't):**

1st: All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp, objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. (1-LS1-1)  
Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. Plants also respond to some external inputs. (1-LS1-1)

2nd: There are many different kinds of living things in any area, and they exist in different places on land and in water. (2-LS4-1)

Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people. (secondary to 2-LS2-2)

### **ELABORATE:**

#### Disciplinary Core Ideas:

Kinder: Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do. ((K-ESS3-2)

Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. (K-ESS3-3)

1st: All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp, objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. (1-LS1-1)  
Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. Plants also respond to some external inputs. (1-LS1-1)

2nd: There are many different kinds of living things in any area, and they exist in different places on land and in water. (2-LS4-1)

### **EVALUATE:**

#### Science and Engineering Practices:

Kinder: Communicate solutions with others in oral and/or written forms using models and/or drawings that provide detail about scientific ideas. (K-ESS3-3)

1st: Make observations (firsthand and from media) to construct an evidence-based account for natural phenomena. (1-LS3-1)











2nd: Develop a simple model based on evidence to represent a proposed object or tool. (2-LS2-2)

**This project was made possible in part by the Institute of  
Museum and Library Services CAGML-248520-OMLS-21**

**Responses to Nature Awareness Attitudinal Survey:**

Enter the total number of responses for each kind of smiley face to each question in the appropriate column.

Number of Participants: \_\_\_\_\_

Question #	Pre-program Nature Awareness Attitudinal Averages					Post-program Nature Awareness Attitudinal Averages				
Face										
Question 1										
Question 2										
Question 3										
Question 4										
Question 5										

**Responses to "A Squirrel Story" Content Assessment:**

For each matching question enter the number of responses for each answer:

Number of Participants: \_\_\_\_\_

Question	Answer: Holes	Answer: Acorns	Answer: Trees
"Squirrels EAT"			
"Squirrels LIVE IN"			
"Squirrels HIDE acorns in"			

Last Question:

Enter the number of students who either drew a picture of OR wrote WATER: \_\_\_\_\_

Enter the number of students who either drew a picture of OR wrote SPACE: \_\_\_\_\_

Please record any other answers entered in the bottom box: \_\_\_\_\_

\_\_\_\_\_

***Please scan this sheet and send it to [acasey@pueblozoo.org](mailto:acasey@pueblozoo.org). Thank you for your feedback!***



**Help us improve our programming  
to better meet your needs.**



Please respond to the following survey by:

- Filling out the form, tearing it off the booklet and mailing it to:  
Pueblo Zoo Ed. Dept., 3455 Nuckolls Ave, Pueblo CO 81005  
OR
- Filling out the form, taking a picture with your phone and sending it to:  
acasey@pueblozoo.org with the Subject Line "All Pueblo Reads"  
OR
- Using the QR code to take the survey online

Grade Level: \_\_\_\_\_; Please circle the answer that best fits your opinion:

1. This curriculum met the science standards for my classroom:

Not at all      Somewhat      Mostly      Very much

2. My students are more motivated to explore outdoors because of this curriculum:

Not at all      Somewhat      Mostly      Very much

3. My students are more inspired to participate in conservation actions as a result of this curriculum:

Not at all      Somewhat      Mostly      Very much

4. The videos included in the curriculum were relevant and age-appropriate:

Not at all      Somewhat      Mostly      Very much

5. The pdf's and activities were age-appropriate and fun:

Not at all      Somewhat      Mostly      Very much

6. I would recommend this curriculum to another teacher:

Not at all      Somewhat      Mostly      Very much

***Thank you for your feedback!***



Please visit our website for more Conservation Education programs at:

<https://www.pueblozoo.org/education>

For information about Community Conservation, we invite you to read our blog:

<https://www.pueblozoo.org/blog>



This project was made possible in part by the Institute of Museum and Library Services;

CAGML-248520-OMLS-21

Este proyecto ha sido posible en parte por el Instituto de Servicios de Museos y Bibliotecas;

CAGML-248520-OMLS-21.

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