

Lesson Plan: Plant and Animal Builders

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Target Grade: Transitional Kindergarten

Teacher Prep Time: 10 minutes

Lesson Time: 2 hours (We recommend doing this lesson over 4 days one part per day.)

- Part 1:
 - 30 min – Where do animals live?
- Part 2:
 - 30 min – *Mama Dug a Little Den*
- Part 3:
 - 30 min – School Exploriment
- Part 4:
 - 30 min – Review

Where This Lesson Fits in:

TK students should be familiar with the outdoors and the living things they might see there. They should already be able to distinguish between plants and animals based on prior experience. Prior to this lesson it is helpful to do the lesson "[What Is Living at My School?](#)" to allow students to discover what plants and animals need to live and what plants and animals are living at their school.

Lesson Overview:

Students will use their past knowledge to draw and discuss where bees, birds, and gophers live. Through this they will learn that animals can change the environment. They will then identify changes animals have made to the environment while listening to the book *Mama Dug a Little Den*. Afterwards, they will learn that plants can also change the environment and go on an exploriment around their school to search for evidence of both animals and plants changing the environment. The lesson concludes with students applying their learning to identify that humans also change the environment.

Learning Objective:

- Students will know that plants, animals, and humans change the environment to meet their needs and be able to give an example of how they do this.

NGSS:

- **Performance Expectation**
 - K-ESS2-2: Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.
 - This lesson is in preparation for the kindergarten PE above
- **Science and Engineering Practice**
 - # 3 Planning and carrying out investigations
 - Doing "exploriments"
- **Disciplinary Core Idea**
 - ESS2.E Biogeology
 - Plants and animals can change their local environment.

- **Cross Cutting Concepts**
 - #6 Structure and Function
 - Students observe the shape and stability of structures of natural and designed objects are related to their function(s).

Materials Needed (see start of lessons sequence for suggested groups):





- [Animal Presentation](#)
- Student worksheet (1 per student + 1 class worksheet)
- *Mama Dug a Little Den* By Jennifer Ward
- Crayons for coloring pictures (optional; 1 pack per student)
- Document camera to share student work

Teacher Prep:

- Print the worksheet (single side not stapled).
- Walk around your school and take note of where plants or animals have changed the environment so that you will be able to bring your students to these areas on their exploriment.

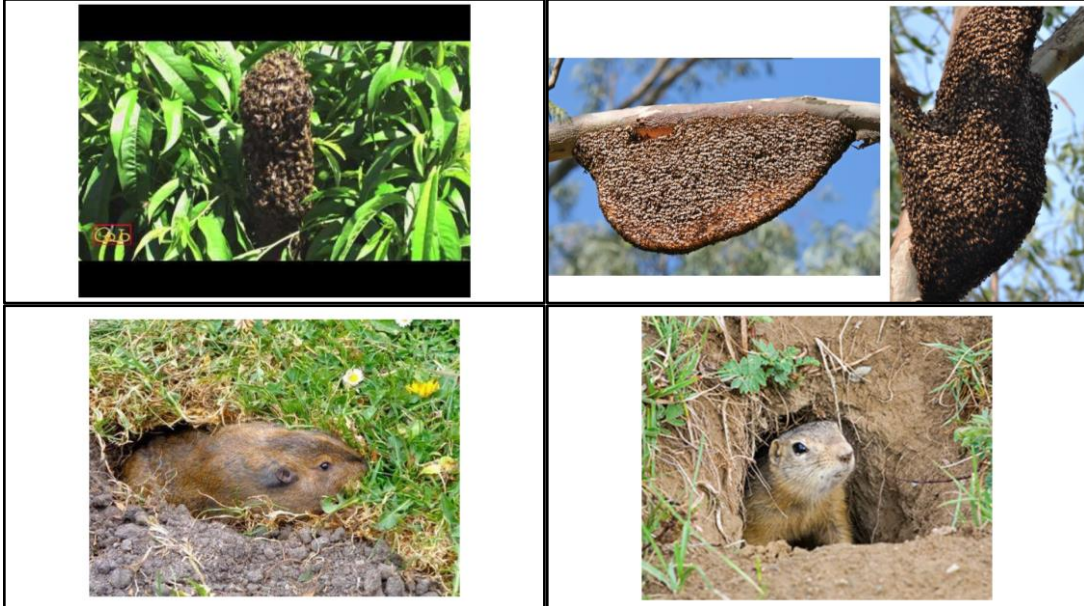
Lesson Sequence:

*For this activity we recommend that students work individually

Part 1:	
30 minutes	<p>Where do animals live?</p> <ul style="list-style-type: none"> • Tell students, “I am going to show you some videos and pictures of animals. During these videos you are going to make observations. Afterwards, you are going to think about what you saw and discuss it with a partner. Finally, you will discuss what you wonder about the video with your partner.” <ul style="list-style-type: none"> ○ While telling students what they will be doing, teach them the hand signals and have them do them with you. <ul style="list-style-type: none"> ▪ Observations: Put hands to their eyes like binoculars. ▪ Think/Discuss: Point finger at brain followed by opening and closing your hand like a talking mouth. ▪ Wonder/Discuss: Rub chin with hand followed by opening and closing your hand like a talking mouth. • Tell students, “You will now observe (do the hand signal) our first animal.” • Show students the first two slides of the Animal Presentation (slide 1: video, slide 2: pictures) focusing on birds. <div style="display: flex; justify-content: space-around; align-items: center;">  <div style="text-align: center;"> <p>Bird Nests</p>    </div> </div> <ul style="list-style-type: none"> • Afterwards, have them discuss their observations in pairs, then share their ideas with the class. • Tell students, “You will now think and discuss (do the hand signal) what you saw the birds doing.” Once they have done this in pairs, let them share their

ideas with the class.

- Tell students, "You will now tell your partner what you wonder (do the hand signal) about the video and pictures." Once they have done this in pairs, let them share their ideas with the class.
- Repeat this process for the bees and the gopher.



- Pass out page 1 of the worksheet to students.
- Tell students, "You will draw a home for a bee, bird, and a gopher in the picture."
- After students have drawn their pictures, share a few of them under the document camera and have students explain what they drew. Make sure to share a picture that has a nest, a bee hive, and a tunnel (a hole).
- Ask students, "Would the nest, hive, and tunnel be there without these animals and why?"
 - ESR: No, because each of the animals built the structure.
- Ask students, "Did the animals change the environment?"
 - ESR: Yes.
- Ask students, "Why did the animals change the environment?"
 - ESR: They changed the environment so that they could have somewhere to live.
- Tell students, "Next session we are going to read a book to learn about other ways and reasons that animals change their environment."

Part 2:

30
minutes

Mama Dug a Little Den

- Have students remind you where birds, bees, and gophers live.
- Ask students, "Do these animals change the environment? If so, how and why do they change the environment?"
 - ESR: These animals change the environment so they have somewhere to live. The bird built a nest, the bee built a beehive, and the gopher built tunnels.
- Show students an object (Ex: pencil sharpener) and ask them, "What is this object?"

- Introduce the term function to students by telling them, “The function of an object or space is what it is used for.” Then ask students, “What is the function of the pencil sharpener?” (Ex: sharpens pencils)
- Write the following sentence frame on the board: _____ change the environment by _____, the function of this is _____.
- Tell students, “We are going to listen to a story about animals and the changes that they make to the environment. After we learn about an animal you will talk in pairs about the identity of the animal, the change the animal made, and the function of the change. Afterwards, we will share our ideas with the class. To help us do this we will use the sentence frame _____ change the environment by _____, the function of this is _____. As a class we will say the portions of the sentence frame that do not change and I will call on a student to fill in each of the parts that change.”
- Have students practice this for the gopher and if needed the bird and the bees. Make sure that students are saying the bolded parts below in choral form and have one student fill in each of the blanks.
 - Gophers **change the environment by** building tunnels, **the function of this is** to have a home.
 - Birds **change the environment by** building nests, **the function of this is** to have a home.
 - Bees **change the environment by** building beehives, **the function of this is** to have a home.
- Read the story to students and stop after each page to have them use the sentence frame to identify what they learned. Below is the text from each page along with how students could say the sentence frame. Make sure that students are saying the bolded parts of the frame together.
 - Mama dug a little den beneath a fallen tree. An earth home as soft as moss, a nursery for three.
 - Foxes **change the environment by** digging holes, **the function of this is** to have a place for their babies to live.
 - Mama dug a little den, then tucked herself away to pass the chill of winter time and days so bare and grey.
 - Toads **change the environment by** digging holes, **the function of this is** to keep warm.
 - Mama dug a little den within a bubbling stream. A rugged lodge of sticks and twigs where we could grow and dream.
 - Beavers **change the environment by** building lodges, **the function of this is** to have a place for babies to grow.
 - Mama dug a little den of furrow in the ground. She hid a nut down in its depths so it could not be found.
 - Squirrels **change the environment by** digging holes, **the function of this is** to store food.
 - Mama dug a little den in tree roots dark and damp - a river house with walls of mud so we could swim and camp.
 - Platypuses **change the environment by** digging holes, **the function of this is** to have a safe place for their babies to live and swim.

- Mama dug a little den, a cave of sparkling snow. She kept us close and warm and fed while winds outside would blow.
 - Polar bears **change the environment by** digging holes, **the function of this is** to keep her babies warm.
- Mama dug a little den to hide out from the sun-- since baking in the desert isn't fun for anyone.
 - Gila (HEE-la) monsters **change the environment by** digging holes, **the function of this is** to stay cool.
- Mama dug a busy den that spanned across the land. A crowded place with many pals, and tunnels, far and grand.
 - Prairie dogs **change the environment by** digging holes, **the function of this is** to have a place for their babies to live.
- Mama dug a little den, a place to hide and wait for some great feast to wander by and meet its final fate.
 - Tarantulas **change the environment by** digging holes, **the function of this is** to have a place to hunt for food.
- Mama dug a little den, and even with its smell, our home was cozy, snug, and safe; we babies loved it well.
 - Skunks **change the environment by** digging holes, **the function of this is** to have a place for babies to rest, grow, and live.
- Mama made a little den of hillside, brush, and boulder. We pounced. We purred. We called it home, until we grew much older.
 - Bobcats **change the environment by** digging holes, **the function of this is** to protect the babies from weather and predators.
- Mama dug a little den along a river's bluff. We stayed inside our grassy nest till I grew strong and tough.
 - Armadillos **change the environment by** digging holes, **the function of this is** to have a place for her babies to grow.
- Mama found a little den, a hiding place for sleeping. And each day as the sun would set we bunnies took to leaping.
 - Rabbits **change the environment by** finding holes, **the function of this is** to give her family a place to sleep during the day.
- Mama dug a sandy den beneath the pale moonlight. She laid her eggs within its depths, then buried them out of sight.
 - Sea turtles **change the environment by** digging holes, **the function of this is** to have a place to lay her eggs so that predators will not eat them.
- Perhaps you'll come across a den, dark and deep and wide....and it will make you wonder who or what might be inside.
- Tell students, "Next session we will go on an exploration around our school to see if we can find evidence of animals changing the environment."

Part 3:	
30 minutes	<p>Exploriment</p> <ul style="list-style-type: none"> • Have students review some of the functions that dens provide for animals. • Ask students, “Do you think that plants can also change the environment?” Then let students share their ideas. By the end of the conversation, make sure they understand that plants also can change the environment. • Tell students, “Dens are big ways that animals affect the environment, but there are little ways that animals affect the environment as well. We are going to walk around school and look for ways in which plants and animals have affected the environment.” • Take students on a walk around the school to find evidence of animals and plants changing the environment. While walking around a local school here are some of the observations that we made. <ul style="list-style-type: none"> ○ Plants: <ul style="list-style-type: none"> ▪ Roots pushing up sidewalks. ▪ No grass near trunks of trees because of shade. ▪ Sour grass only growing in shaded areas beneath trees. ▪ Pine needles on bushes, and bushes shorter beneath pine trees. ○ Animals <ul style="list-style-type: none"> ▪ Gopher mounds. ▪ Bird nests. ▪ Termites eating boards. ▪ More birds near the garden area because of the food. ▪ Pine cones eaten by an animal. ▪ Wasp nests. • Tell students, “Tonight when you go home see if you can find any evidence of plants or animals changing the environment near your home..”
Part 4:	
30 minutes	<p>Review of Changes Plants, Animals, and Humans, can Make</p> <ul style="list-style-type: none"> • Ask students, “Did anyone see evidence of animals or plants changing the environment around their house?” • Have students remind you of some of the ways that they saw that animals and plants changed the environment around their school. • Ask students, “Do you think that humans change the environment?” • Have students give you some examples of how humans have changed the environment and the function of these changes. • Pass out page 2 of the worksheet to students. • Tell students, “You are going to draw a picture of plants, animals, and humans changing the environment.” • Once they have finished their picture, put a few of them under the document camera and have students share what they drew.

Example Student Work:

Name Janis

 Draw a  home


for a  bee,

for a  bird,

and a  gopher.




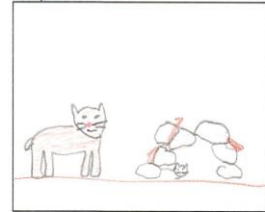
Name Janis

 Draw how these things change the environment.

 plants



 animals



 people

