Lesson: “Why would a wild animal visit a playground?”

VIDEO TRANSCRIPT

EXPLORATION VIDEO 1

Hi, it's Jay from the Mystery Science Team. Think about the last time you went to a playground. Maybe you slid down the slide, or maybe you played on the swings. If you went to a playground in a park, like this one, maybe you played tag or some other game on the grass. You probably didn't see any big wild animals roaming around. Oh, maybe you saw a rabbit hopping across the grass, or a squirrel up in a tree, but I'm guessing you've never seen these. These are bighorn sheep, wild desert animals that are usually very shy and hard to find. Why would these animals visit a playground? Bighorn sheep are at home in the mountains. They have no problem running or leaping up a steep, rocky slope. It would take me hours to climb up there, if I could do it at all. It takes bighorn sheep just a couple of minutes. These sheep can stand on a ledge that's just two inches wide, just like I'd stand on a flat floor. Finding bighorn sheep in the wild isn't easy. First, you have to hike into the desert, and then you have to climb up into the mountains to get to the rocky slopes where the sheep live. After you find the sheep, chances are they'll vanish from sight, climbing where you can't follow. So getting a close look at a bighorn sheep is really tough—unless you go to this playground in Boulder City, Nevada. The playground is part of a small park with slides and swings where kids can play, park benches where people can relax, and green grass where people can spread out a blanket and have a picnic. On most summer days, any visitor to the park can see the sheep hanging out near the playground, grazing on the

lawn, scratching themselves on park benches, and relaxing in the shade. If you want, you can take their picture. They don't seem to mind. Late in the afternoon, the bighorn sheep leave the playground, heading back into the dry desert and up into the mountains. They sleep there at night, then come back to the playground the next day. Here at Mystery Science, we started wondering: Why do these wild animals make the long trip down from the mountains to visit this playground?

EXPLORATION VIDEO 2

To figure out why the bighorn sheep do what they do, scientists don't just look at the bighorn sheep. They also look at where these animals live and what they need to survive. The place an animal lives is called a habitat. From their habitat, animals get food, water, protection from danger, and other things they need. There are many different types of habitats in the world, like tropical rainforest habitats where the trees grow tall. In a rainforest, it's warm all year and it rains a lot. A rainforest is home to many kinds of monkeys, birds, frogs, and lots of other animals. Grassland habitats, like the Great Plains in the United States, are where you see animals that eat grass, like bison, antelope, and mule deer. Ocean habitats are the watery homes of fish and whales. In desert habitats, it hardly ever rains. The bighorn sheep that visit the playground live in a desert habitat. In fact, they live in the driest, hottest desert in the United States. Some parts of the desert are flat, like this, and some are mountainous, but all of the desert is hot and dry. The grassy lawn that surrounds the playground is a habitat too. It's a habitat that people made in the middle of the desert. Unlike the desert, the lawn near the playground isn't dry. People planted this grass and they keep it growing with water that is pumped from far away. People also planted trees to make shade. Looking at this shady lawn, you might think that sheep would want to spend all their time here. But every night, the sheep go back to the desert mountains to

sleep. The playground closes at night, but the sheep don't know that, do they? Nah, they can't read the sign. The sheep could sleep in the park if they really wanted to. So here's a tough question: The park with the playground seems like a great place for the sheep—so why do the sheep climb back up into the dry mountains every night?

ACTIVITY INTRODUCTION VIDEO

In today's activity, you'll be going on a virtual field trip, looking for clues that will help you solve the mystery of the bighorn sheep. What brings the bighorn sheep to the park in the first place, but also, why do they travel back to the desert at night? To figure this out, you'll need to gather clues from both habitats, the park and the desert. When scientists study habitats, they make observations of everything about that habitat: what animals live there, what plants live there, and is there anything else about the habitat that makes it a good place for an animal to live? Each clue you find will be one piece of the puzzle. At the end of the activity, you'll put all your clues together to solve the mystery. We'll show you how to get started, step by step.

ACTIVITY STEP 1

Get your supplies. Each person needs a Habitat Journal and a pencil. When you're done with this step, click the arrow on the right.

ACTIVITY STEP 2

You'll record your observations in your Habitat Journal. So, let's make that first. You'll fold along this thick black line. To do this, flip the paper over and then line up the corners of the paper, like this. Fold it in half, and then use your fingernail to make a good crease. Then fold it in half again

along this line. Remember to use your fingernail to make a good crease. When you're done, it should look like this.

ACTIVITY STEP 3

Write your name and the date on the front of your Habitat Journal. Then open your journal so that you can see the page that says Park Habitat at the top.

ACTIVITY STEP 4

In a moment, you're going to practice looking for animals in the park. You'll watch for five different kinds of animals: bighorn sheep, hawks, lizards, tortoises, and coyotes. I'll set a timer for 15 seconds. Count how many of these animals you see. Ready, set, go! Okay, time's up. Go to the next step to see how you did.

ACTIVITY STEP 5

You may have noticed that it's hard to remember all the animals you see and how many times you see each one. To help you do that, you'll use your Habitat Journal. We'll show you how to do it, but don't do anything yet. Watch carefully so you know what to do. If you see an animal, like this lizard, add an X in the box right above that animal. Each time you see an animal, you make another X. If you see the same kind of animal again, like this lizard, add another X above it, like this. When you're done, you'll know how many animals you've seen and which ones they were. In the next step, you'll add Xs to your own Habitat Journal.

ACTIVITY STEP 6

In a moment, you'll have a minute and 30 seconds to find as many animals as possible in the park habitat. You'll have to be quick because that animal might move and disappear from view. Remember, when you see an animal, find it in your Habitat Journal and add an X to the square above it. If you miss one, that's okay. Ready, set, go! All right, time's up. Go to the next step.

ACTIVITY STEP 7

Which kinds of animals did you find in the park habitat? Circle each kind of animal that you saw.

ACTIVITY STEP 8

Now let's count up the total number of animals that you found in the park. To figure this out, count up all the Xs that you made, then write that number in your Habitat Journal. If you missed seeing a few of the animals, that's okay.

ACTIVITY STEP 9

Okay, now it's time to visit the desert to see how many animals you can find there. Make sure you're looking at the part of your journal labeled Desert Habitat. Go to the next step to begin.

ACTIVITY STEP 10

You'll have a minute and 30 seconds to find as many animals as possible in the desert habitat. Watch carefully, and remember to add an X to your journal for each animal that you see. Ready, set, go! All right, time's up. Go to the next step.

ACTIVITY STEP 11

Okay, which animals did you find in the desert habitat? Circle each kind of animal that you saw in the desert.

ACTIVITY STEP 12

Now let's count up the total number of animals that you found in the desert habitat. To figure this out, count up all the Xs that you made. Then write the number here in your Habitat Journal. Remember, if you're missing a few of the animals, that's okay.

ACTIVITY STEP 13

Now that you've had the chance to observe animals in the park habitat and animals in the desert habitat, discuss, and then answer question number 1 in your Journal.

ACTIVITY STEP 14

Here's what we noticed. There are more kinds of animals that live in the desert habitat compared with the park habitat. Scientists call this diversity, a word you may have heard before. The desert habitat is more diverse than the park habitat. We also noticed that we were able to find a larger number of bighorn sheep in the park habitat. Why do so many of the bighorn sheep visit the park? Well, there's more to learn about a habitat than just the animals that live there. Go to the next step to continue exploring the park and desert habitats.

ACTIVITY STEP 15

Habitats also have plants that live there. We decided to talk with a botanist, a scientist who studies plants. She made observations in the park and desert habitats, but instead of counting animals, she counted the number of plants that bighorn sheep can eat. Here's what she found. Discuss, and then answer question number 2 on the back of your Habitat Journal. Then, watch the next video.

WRAP-UP VIDEO 1

In today's activity, you saw some of the animals that live in the desert and in the park. You also looked at the plants that grow in both places. You saw that lots of different plants grow in the desert. That means there are many different things that the bighorn sheep can eat, but finding enough food in the desert isn't easy. There are lots of kinds of plants, but there are only a few of each kind, and some of those desert plants even fight back. A bighorn sheep can eat a cactus, but it's a lot of work to avoid those spines. To get enough food in the desert, the sheep have to travel farther and work harder. In the park, there's only grass to eat, but there's a lot of grass. That grass is the reason the sheep visit the park—but we still don't know why they leave the park at night. To figure that out, let's think about what the bighorn sheep need from the desert. Maybe you wondered where the sheep get water to drink? It's dry in the desert, but there are a few springs and creeks where the sheep can drink. In the park, they drink water from the lawn sprinklers, so they don't leave the park to get water. Then why do they leave the park at night? We went to the park to try to figure that out. Watch these bighorn sheep and look for a clue. Wow, all of a sudden they stopped eating. Some of them ran away. What are they doing? We noticed that they are looking in the same direction. It looks like they are all watching something.

What could they be watching? What's that over there by the fence? I bet you can recognize that animal. It's a coyote. The bighorn sheep keep watching the coyote. They don't start grazing again until the coyote runs away. Coyotes are predators, animals that hunt other animals for food. They eat other animals like mice, and rats, and rabbits, and sometimes they go after bigger animals, like young bighorn sheep. When the bighorn sheep saw the coyote, they got ready to run or fight the coyote. Coyotes aren't the only animals that hunt for bighorn sheep—so do cougars and bobcats. Bighorn sheep are always keeping an eye out for all of these predators. Could these predators be a reason that the bighorn sheep go to the desert at night? We spoke with a scientist who will give us a clue to help answer this question. You'll need your Habitat Journal.

ACTIVITY STEP 16

We talked to a wildlife biologist who watches what bighorn sheep do in the desert mountains. She showed us these photos of the bighorn sheep in the park and in the desert habitat. What do you notice? Discuss, then answer question number 3 in your Journal.

ACTIVITY STEP 17

Discuss, then answer question number 4 in your Habitat Journal. Then, watch the final video.

WRAP-UP VIDEO 2

Night is a dangerous time for bighorn sheep. At night, coyotes, cougars, and bobcats are all hunting for dinner. The sheep need a safe place to sleep. There's a reason the sheep were staring at that coyote in the park. On flat ground, a coyote can outrun a bighorn sheep. That coyote was a threat. In the mountains, it's a different story. Take a look at this cliff. You might

think that this would be an uncomfortable place to take a nap, but you're not a bighorn sheep. So at night, bighorn sheep climb cliffs, like this. They find small ledges where they can sleep. Their brown fur matches the brown rock. It's hard for predators to see the sheep, and even harder to follow them up there. From up high, the sheep can see any predators that are headed their way. If a cougar tries to sneak up on them, they'll see it coming. And if one sheep sees or hears a predator sneaking up, they'll warn the others, and the sheep can easily get away on the steep, rocky land. The grassy lawn in the park is a great place for the sheep to find food, but the rocky slopes of their desert mountain habitat are the safest place for the sheep. So at night, the sheep go to the safety of the mountains. Now that you know why the bighorn sheep come to the playground, keep an eye out for other animals that show up somewhere surprising, like a ladybug in your house on a cold winter day, or a raccoon in your trashcan. Think about what the animal is looking for and how the habitat meets that need. Have fun, and stay curious.