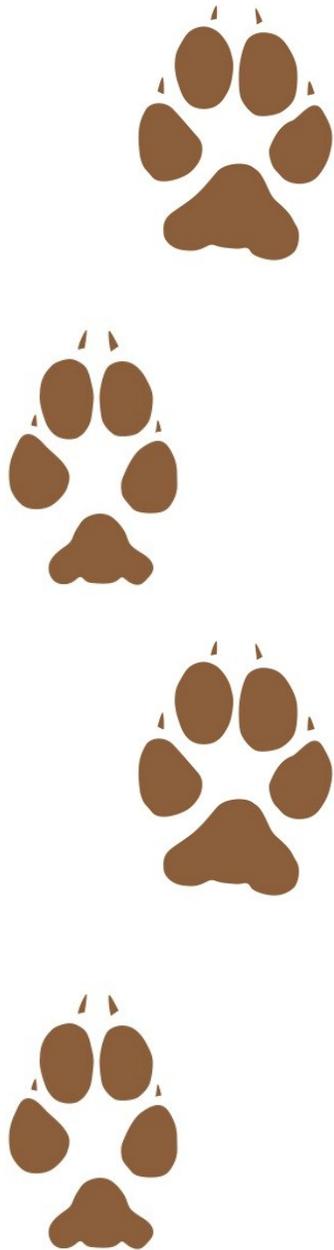


Hudson Explorers



Secret Spaces Activity Guide

Dear Educator,

Welcome! Today you and your group will learn all about the wildlife that live at Hudson Gardens.

You will find an Activity Guide, map, and all of the tools you will need to complete each activity in your Hudson Explorers Activity Pack. As you read through the Activity Guide, you will notice that educator instructions and prompts are written in ***bold italics***. The rest of the text found throughout the Activity Guide is meant for you to read aloud with your students.

Using the Activity Guide and the map provided in the Activity Pack, you will proceed in sequential order to each of the following five Activity Stations located throughout the Gardens:

Activity Station #1 – Blending In, Location: Picnic Area

Activity Station #2 – Hanging Around Our Habitat, Location: Amphitheater

Activity Station #3 – Micro Habitats, Location: Conifer Gove

Activity Station #4 – Wildlife Trail, Location: Cascades

Activity Station #5 – Animal Optics, Location: Picnic Area

Activity Station #6—Wild Wetlands, Location: Wetlands

Activity Station #7—One Small Place in a Tree, Location: Picnic Area

Your journey today will start at the Welcome Garden (the area behind the Welcome Center). You can access the Welcome Garden through the wooden gate to the left of the Welcome Center.

◆ ***Proceed to the Welcome Garden now.***

Restrooms are available in this area. Once your group is ready to begin its journey, locate Activity Station #1 on your Map. Before heading to your first activity, please remind students to respect wildlife and their homes the way they expect strangers to respect their home.

Blending In

Educator Instructions:

- ◆ *Find a picnic table for your group to sit anywhere in the Picnic Area.*

Hudson Gardens is a very special place for wildlife because they choose to live here. Although we might not see or even hear the wildlife around us, we know that they are here, hiding in their secret spaces.

In order to learn more about animals and their habitats, or secret spaces, you'll need to look like animals by wearing camouflage. Animals have camouflage, the colors and patterns on their bodies, that help them blend into their surroundings.

- ◆ *Hand out one camouflage vest to each student.*
- ◆ *Once everyone is wearing the camouflage, have the group stand up and spread out.*

What colors do you see in the camouflage? ***(Wait for responses.)*** Do you see any of these same colors in the environment around you?

The colors that are on your camouflage vests are the same colors you see in the leaves and bark of trees, and in the soil beneath our feet. Do you think it would be harder or easier to see you if you were walking in the woods with your camouflage vest?

Camouflage acts the same way in animals! It makes them harder to see. Can you think of a reason why an animal would want to be hard to see? ***(Wait for responses.)*** Yes! Camouflage helps animals hide from their enemies, called predators. Can you think of any animals that are camouflaged?

The colors that animals are camouflaged in are very specific to the type of habitat they live in. Let's learn more about animal habitats.

- ◆ *Students should keep their camouflage on during the rest of the visit.*



**Go to Activity Station #2
at the Amphitheater**

Hanging Around Our Habitat

Educator Instructions:

- ◆ *Make sure that you are in an open grassy spot.*

What is a Habitat?

All animals, including people, wildlife, and pets, have similar basic needs. They all need food and water, a place to sleep and be protected, and space to move around. A person can find everything they need in the neighborhoods they live in. We have grocery stores for food, faucets for water, houses to shelter and protect us, and places like parks and gardens to move around.

Animals also have neighborhoods that provide everything they need to survive. An animal's neighborhood is called their habitat. A habitat is the place where an animal lives. There are many different kinds of habitats in the world—deserts, swamps, forests, and gardens like the one you are visiting today. Habitats can be different for different kinds of animals, but all habitats must include these four things:

Food—The things that an animal eats to survive. An animal might eat only plants, only meat, or a combination of both!

Water—Just like us, every living creature needs water.

Shelter—Animals need places to sleep, eat, hide from predators and to raise their babies and young.

Space—Animals need an area to roam around.

Now let's find out how important each of these elements is to an animal!

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Lap Sit

Educator Instructions:

- ◆ ***Number the students from 1-4 and assign “habitat elements” to each of the groups as follows: 1 = food; 2 = water; 3 = shelter; 4 = space.***
- ◆ ***Students should remember the numbers and what they stand for.***
- ◆ ***Have the students make a circle, standing shoulder-to-shoulder and facing the middle of the circle. Make sure that no one is standing next to someone with his/her same number.***
- ◆ ***Staying in a circle have all students turn toward their left. Facing left have everyone take one step toward the middle of the circle. Everyone should be close together, looking at the back of the head of the person in front of them.***
- ◆ ***Have everyone place their hands on the shoulders of the person in front of them. Everyone should keep their knees together as much as possible, and on the count of three, everyone needs to sit down on the knees of the person behind them. Everyone should be sitting down in a circle! If everyone falls, try it again until you get it.***
- ◆ ***After the circle is successful explain the following:***

The lap-sit circle represents a healthy habitat. In order for an animal to survive and a habitat to be healthy, the habitat needs all four elements—food, water, shelter, and space.

What would happen if a habitat was missing any of the four necessary elements? Let’s find out!

- ◆ ***Have everyone make the lap sit circle again.***

Let’s pretend that an oil truck spilled last night and polluted all of the water in the area. All of the “water” students—please remove yourself from the habitat. What happened? ***(The circle collapses.)***

- ◆ ***Have everyone sit down on the grass in a circle. Discuss what you just learned about habitats.***

Even though different animals have different habitats, all habitats need to include those four elements. If even one element of the habitat is gone, the habitat is destroyed and animals can’t survive there.



**Go to Activity Station #3
in the Conifer Grove.**

Micro Habitats

Even when we can't see wildlife, they exist somewhere near us, maybe even under our feet! To get started thinking about animals being in habitats where you might not expect, we'll need the wildlife magnet sheet and timer out of our Activity Pack.

Let's see what wildlife our magnet will attract!

- ◆ *Remove the wildlife magnet and timer from the Activity Pack.*
- ◆ *Lay your wildlife magnet on the ground, shiny side up, under a tree with an accessible branch that you can reach to shake. Gently shake the tree branch (insects should fall from the branch onto the wildlife magnet) and then flip over the timer.*
- ◆ *As a group, walk away from the magnet. When the timer runs out, return to the magnet.*
- ◆ *Without touching the magnet, have the students inspect the magnet for wildlife.*

Are there any signs of wildlife on our magnet? What can you observe?

Animals can have very different types of habitats. Big animals are easy to see and their habitats are very big. But like you saw with the wildlife magnet, some habitats are very small, such as a blade of grass or twig.

That is why it is very important to never break off branches of trees, pull leaves off of plants, or walk in areas that are not on paths, because you might be disturbing an animal's secret space!



**Go to Activity Station #4
in the Cascades**

Wildlife Trail

- ◆ *Find the secret trail along the Cascades.*

Did you know that even if you don't see animals, they leave other hints to let us know that they were here? In the gardens we can find evidence of animals everywhere we look!

- ◆ *Ask your students to find a partner (or assign students to pairs) for the next activity.*
- ◆ *Remove the evidence rope and timer from your Activity Pack.*
- ◆ *Lay the rope out on the ground along the dirt trail.*
- ◆ *Direct your students to look for signs of wildlife along the rope trail with their partner. Direct them to look along the rope but also within five feet on each side of the rope.*
- ◆ *As they are looking for signs of wildlife remind your students to look up and around them and to use their eyes and ears for wildlife signs.*
- ◆ *Allow your students time (use the 1-minute timer for 1 or 2 cycles) to explore the area around the ropes.*
- ◆ *When they are done with their observations, sit down as a group and ask each pair to describe what they saw and heard.*

Did any of you find:

- A track or foot print
- Spider webs
- Sound of birds chirping
- Leaves with holes
- Animal food leftovers (broken nuts or berries)
- A live animal (insect, squirrel, bird, etc.)
- Feathers
- Animal droppings (scat)
- Bird nests
- Sounds of frogs croaking

Even though we may not see wildlife all the time, we know they are hidden in their secret spaces by the evidence they leave behind. When wildlife hide, we might not be able to see them, but do you think they can see us? ***(Wait for responses.)*** Let's find out!



**Go to Activity Station #5
at the Pond**

Animal Optics

How do animals see?

Animals do not have the same kind of vision that people do. Each type of animal has a special kind of vision that helps it protect itself and find food.

Differences in the bodies of wildlife that help them survive in their habitat are called adaptations.

- ◆ *Remove the Optics Kit from your Activity Pack. Take everything out of the Optics Kit and put the Optics Answers Guide to the side (you'll need it later).*

(Holding up each of the optics items) Each of these objects copies the vision of a certain kind of animal. Let's pass around each of these objects and try to figure out which animal may have each of these types of vision.

- ◆ *Pass each of the objects around the group.*
- ◆ *Answers can be found in the Optics Answers Guide.*

As you can see, animals see differently than people and sometimes their vision isn't very good. Some animals rely more on their other senses, like hearing and smell, to find food and detect anything that might be dangerous.



**Go to Activity Station #6
at the Wetlands**

Wild Wetlands

Most of the animals that live at Hudson Gardens spend at least some of their time in the Wetlands because many types of plants and animals live here, making it easy for wildlife to find food.

Besides food, the Wetlands also provides three other important parts of a habitat. Can anyone remember the other important parts of a habitat? ***(Wait for responses—water, shelter, and space.)***

◆ *Pass around the binoculars from your Activity Pack to each student.*

Using our binoculars and just our own eye sight, let's see what kinds of wildlife are using the wetland habitat. Make sure to look at all of the spaces that make up this habitat—in the water, on the banks, and even up in the trees.

Can anyone spot:

- Fish
- Snakes
- Dragonflies
- Geese
- Rabbits
- Frogs
- Raccoons
- Muskrats
- Turtles
- Squirrels
- Coyotes
- Ducks

◆ *After spending some time making observations in the Wetlands, walk to the Picnic Area and find the Wildlife Tree. The Wildlife Tree is directly across the pathway from the Barn and is a dead Cottonwood tree with no branches, stripped bark, and with large and small cavities throughout the tree.*



**Go to Activity Station #7
at the Wildlife Tree**

One Small Place in a Tree

The Wildlife Tree died a few years ago but it was not cut down because it is a very good habitat for many kinds of animals. What kinds of animals do you think might live in or use the Wildlife Tree? Can you see any place on the Wildlife Tree where an animal might live? (***Wait for responses.***)

- ◆ ***Point out a cavity (hole) in the tree.***

This hole, called a cavity, has been used by squirrels, raccoons, and birds as a nesting place to raise their babies.

Educator Instructions:

- ◆ ***For the last activity, go to the Picnic Area and find a picnic table for your group to sit (feel free to pull two picnic tables together).***
- ◆ ***Remove the book, One Small Place in a Tree, from your Activity Pack.***
- ◆ ***Read the book aloud to your group using the reading guide below.***

Before Reading

- ◆ ***Have students make observations about what is shown on the front cover (tree cavity with various animals around it).***

Does this tree cavity look like the one on the Wildlife Tree? Do you think a snake or mouse could live in the Wildlife Tree? Why or why not?

While Reading

- ◆ ***As you reach each new page, ask your students if the animal highlighted on that page might be an animal that lives at Hudson Gardens. If not, ask your students where they think they might find that animal.***

After Reading

- ◆ ***Ask your students to come up with some ideas about how the Wildlife Tree died and how the cavities appeared inside the tree.***

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Congratulations!

You have completed Secret Spaces!

As we saw on our visit today, many kinds of wildlife live at Hudson Gardens. As you think about all you learned today, can you guess why you might see more animals at Hudson Gardens than you see in the middle of the city or in the neighborhood that you live in?

Remember what you learned about wildlife and their secret spaces as you explore the rest of Hudson Gardens and be especially careful not to disturb any animals that you might see or disrupt their habitats.

- ◆ *Please collect all materials and camouflage vests and return them to your Activity Pack.*
- ◆ *Please return Activity Packs to the Welcome Center before leaving Hudson Gardens.*

**Thanks for visiting and come
see us again soon!**