

## *Diversity of Living Things: Day 3*

This week through Weekday Wonders, young scientists will delve into the diversity of living things. The week starts with your scientist discovering basic physical characteristics of animals. Then scientists will explore how these characteristics are tools to help sort animals into groups. Young scientists finish the week by looking at how the differences in these characteristics, even within the same group, play an important role in their survival.

These curated activities are listed in a suggested sequence but may be done in the order that works best for you and your young scientists. Learn more about this series in the [Introduction to Weekday Wonders](#).



### Question of the Day

**How can knowing the characteristics of animals help sort them and know what they are?**



### Daily Nature Journal

Ask your young scientists to spend some time outside completing their daily nature journal. Use the [Guide to Nature Journaling](#) to support them in nature journaling each day. Ask him or her to find a new spot or a new vantage point. If your scientist has been sitting all week while doing his or her daily nature journal, ask them to lie down or stand. A simple change like this can give your scientist a new perspective.



### Item Sort

Ask or help your young scientist to gather 15-20 items from around the house. Once the items have been gathered, tell your scientist that you will give them 3 minutes to sort the objects however s/he wants. Encourage your young scientist that there is no right or wrong way to sort the items. Give the youngest scientists an opportunity to think through the grouping on his or her own. If s/he seems to struggle, offer prompts such as, "Can you sort by color?" and "Can you sort by shape?"

Ask your young scientist to explain how and why s/he made the groups the way they did. The reasoning may surprise you! Now ask your scientist if there are any other ways the items could be sorted. Set another three minute timer to allow your young scientist to regroup the items in a different way. Repeat this as many times as your scientist would like.

For older scientists, ask them more in-depth prompts to get them thinking outside the box. These could include

- Sort the items based on the materials they are made from.
- Sort the items based on how they are used.
- Sort the items based on texture.
- Sort the items based on the weight.

To extend the activity, have your scientist consider the various different groups of items that s/he has made. Challenge your scientist to choose one of the groups to sort further. There is no right or wrong answer, but make sure your scientist can explain his or her logic behind the smaller groups.



## Animal Classification Race

In this activity, your young scientist is going to race to classify different animals. Have them collect stuffed animals from around the house or use the cards from the “Safari Sort” on pages 4 and 5 of [yesterday’s Weekday Wonders](#).

To begin this activity, have your young scientist place all of the animals or photos in pile on one side of the room or outdoor space. Next, you or your scientist should designate separate areas on the other side of the room or outdoor space to represent the following types of animals.

- (1) mammals
- (2) amphibians
- (3) birds
- (4) reptiles
- (5) invertebrate
- (6) fish

For the youngest scientists, you may want to start with just two categories, such as mammals and birds or birds and invertebrates. Once they have mastered those categories, add one or two more categories at a time until they are able to sort all six categories.

To play, have your scientist choose a stuffed animal or photo from the pile and run it to the corresponding pile on the other side. For example, if your scientist chooses a dog, s/he should run it to the area designated for mammals. Have your scientist repeat this exercise until all of the animals have been grouped into one of the six basic groups of animals.

If your scientist is having trouble, remind him or her about the basic physical characteristics of the animals in each of these six groups. Discuss how mammals have fur or hair on their bodies, while birds have feathers and wings. Amphibians have smooth and moist skin, while amphibians have dry and scaly skin. Invertebrates do not have a backbone, and fish have gills, fins, and scales.

To support you with the sorting, the “Safari Sort” animals fit into the following categories.

Mammals: elephant, bear, lemur, squirrel, otter

Amphibians: frog

Birds: duck, eagle, penguin

Reptiles: alligator, snake, turtle

Invertebrate: jellyfish, crab, ladybug

Fish: fish



## Nature Journal

Ask your young scientist to observe the animals in the house or outside—humans and pets should be included. Have your scientist draw 2-5 animals that s/he sees. Ask him or her to think back to the classification race activity. Which group of animals does your scientist think the animals they drew belong to? Ask your scientist to circle the physical characteristics of that animal that helped him or her decide.



## And The Beaks Have It!

During the animal classification race, your young scientist explored how animals are divided into basic groups based on some of their physical characteristics. Even within those basic groups, physical characteristics can help sort the animals into even smaller groups. For this activity, your scientist is going to focus on birds to discover how beak shape can help scientists (including your young scientist!) learn more about the birds.

Ask your young scientist to look at the picture on page 4 and think about how humans use each tool. Next, have him or her look at the pictures of the different birds on page 5, focusing on the beaks. Ask your scientist to try to match each utensil’s function with the way a bird might use its beak. For example, a straw allows humans to suck up liquid and help us drink. A hummingbird’s long, thin beak lets them suck the nectar out of a flower. The following key can help you give your scientist hints, if needed.

Toucans use their beaks to pluck and peel fruit.	Tongs	Hummingbirds have long, thin beaks to suck nectar from flowers	Straw
Herons use their long, thin beaks to pluck food out of the water or off the ground.	Skewer	Ducks use their beaks to find, grab, and swallow food, filtering out excess water and non-food items.	Slotted Spoon
Woodpeckers have sturdy, strong beaks with a chisel tip to drill holes in wood.	Drill	Parrots use their strong and sturdy beaks to tear, crush, and grind food.	Pliers
Flamingos’ beaks have a filter-like structure to remove food from water before they expel the liquid.	Colander		



Discuss with your young scientist why s/he thinks birds have different types of beaks. Your scientist should make the connection that birds use their beaks for eating different types of food. Having different beaks allows for different kinds of birds to eat different things. A bird's beak is a specially designed tool to help them eat a certain type of food. Just like we use certain tool for certain tasks. You wouldn't eat ice cream with a knife—a spoon works much better! Similarly, a woodpecker would not be able to make a hole in a tree to get an insect with a beak that looks like a slotted spoon.

## And the Beaks Have It! Tool Picture





## And the Beaks Have It! Bird Pictures



<b>Toucan</b>	<b>Hummingbird</b>
<b>Heron</b>	<b>Duck</b>
<b>Parrot</b>	<b>Woodpecker</b>
<b>Flamingo</b>	