

## *Nature Detectives: Day 5*

This week your young scientist will use his or her amazing observations skills to examine and investigate on a smaller scale. Sharp sleuthing skills will find signs of living things in your backyard. As s/he explores, your young scientist will put together clues to know, while you may not always see a living thing, signs are all around to know it is there.

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

**Why do plants come in so many different shapes and sizes?**



### Daily Nature Journal

Ask your young scientist to spend some time outside today completing a daily nature journal entry. Ask him or her to focus on looking for evidence of living things, such as tracks or cracked seeds. Use the [Guide to Nature Journaling](#) to support them in nature journaling each day.



### Dressed for Success

Ask your young scientist to look around the yard to see how many different flowers s/he can find or look at the flower photos on page 6. Have your scientist make observations comparing the colors, shapes, and sizes.

Tell your scientist that these characteristics are important when it comes to attracting pollinators. Pollinators carry pollen from one plant to another, so they can reproduce and make more of that kind of plant. Often pollinators are visiting the flowers to help themselves to some sweet nectar, but pollen also sticks to their bodies and gets carried from flower to flower.

Print out the pollinator descriptions on page 5 and the flowers on page 6 and have your young scientist cut them apart. If you do not have access to a printer, you can also simply show these pages to your young scientist. Have your scientist work as a nature detective by using the clues to match pollinators to the flowers they might find attractive. Your scientist may find that there are multiple flowers one pollinator might like or multiple pollinators that would like a particular flower.

For more information on pollinators you can visit

<https://www.fs.fed.us/wildflowers/pollinators/animals/>.



## By Land, Water, Air, or Animal

Tell your scientist that plants have adapted some unique ways for their seeds to move away from the parent plant. Some have wings or feathery, fluffy tuft to travel in the air with the wind. Some depend on animals to move them from place to place. Others simply fall to the ground, and others depend on water to carry them from place to place. Even in these categories there is a lot of variation when it comes to seeds. In this activity, your young scientist explores the ways seeds over.

Write each of the seed and movement descriptions in the following table on slips of paper and place them in a container. You can also print them out and cut them apart. Decide on a playing area in the yard or a room. Your young scientist should pull one slip out and act out the movement of the seed across the whole playing area.

Description of Seed Type	Movement Scientist Should Perform
Acorns are nuts that fall to the ground	Stand, then fall to the ground in a ball
Maple seeds have two wings that cause it to spiral in the wind	Hold both arms out straight and spin
A tulip poplar has one wing that makes it spiral in the wind	Hold one arm out straight and spin
A dandelion seed is a small seed with a feathery tuft at the end, so it travels straight with the wind	Run in a straight line
Walnuts fall to the found	Stand, then fall to the ground in a ball
Beggar's tick seed has tiny hooks that attach to an animal's fur	Bounce as if riding on an animal
Mangroves have bottom heavy seed that float with a sprout above the water	Waddle as if being rocked in waves of water
Persimmon berries are large seeds that must be eaten and passed through an animal	Crawl slowly showing it is dependent on the animal

After playing the game, ask your young scientist to reflect on the different ways the seeds moved. Ask him/her which was their favorite way to move and why. See if s/he can think of advantages for different plants to have different ways of spreading seeds?

### **Variation:**

If there is more than one young scientist playing (or if you want to play with your scientist), rather than draw the slips, one person calls out seeds and others move the way the seed is dispersed until the next seed is called. As the scientist becomes familiar with the movements, add to the fun by varying the time between changing seeds. For example, call “maple” so your scientist begins spinning with both arms outstretched. Ten seconds later, call “mangrove” and have the scientist waddle. Five seconds later, call “walnut” so the scientist drops like a nut. Immediately call “persimmon” to have the scientist crawl for 30 seconds.



## **Nature Journal**

First thing in the morning with grass still wet from the dew, have your young scientist put a large pair of socks over his/ her shoes and take a walk through a grassy spot. After a few minutes, inspect the socks. Discuss the following questions together.

- What all has collected on the sock?
- What benefit might it be for the seeds to attach to something?
- How does attaching to a sock simulate movement of seeds?

Ask your young scientist to imagine being a plant. It can be any kind of plant, but have your scientist be specific. Ask your scientist to write a draw a year in the life of the plant. S/he should include a description of the plant, the flowers, the way it is pollinated, and the way the seeds are dispersed (move). The story can include animals that visit the plant and/or the adventures of the seed before it begins to grow. Encourage your scientist to be creative.

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Blister Beetle, National Park Service, <https://www.nps.gov/media/photo/view.htm?id=9D47F7B8-155D-451F-67E77BBEBD886B36>

Flower Fly, M. Gorman, National Park Service, <https://www.nps.gov/media/photo/view.htm?id=578a27c5-bd67-4628-b8e8-810ca72332bb>

Mexican Long Tongued Bat, U.S. Fish and Wildlife Service,  
[https://commons.wikimedia.org/wiki/File:Choeronycteris\\_mexicana\\_Mexican\\_long-tongued\\_bat\\_\(7371567444\).jpg](https://commons.wikimedia.org/wiki/File:Choeronycteris_mexicana_Mexican_long-tongued_bat_(7371567444).jpg)

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All other flower photos: Cardinal Flower, Purple Aster, Catnip, Butterfly Weed, Wild Ginger, Morning Glory, Joe Pye Weed, Purple Coneflower, National Park Service. Available through search on <https://www.nps.gov/media/multimedia-search.htm>.

## Dressed for Success Descriptions



**Bee:** I cannot see red so I prefer flowers that are purple, blue, yellow or white or a mixture of these colors. Many of the flowers I visit have a sweet smell and the nectar may be deep inside the elongated or tube like flower. I am active during the day—or diurnal—so the flowers I like to visit are open while you are awake. Some of the flowers I visit even have a place for me to sit. They may even have little lines leading me to the nectar although you may not be able to see them.



**Butterfly:** I love many bright colors (red, orange, deep pink, blue and lavender) so you will often find me on flowers sporting showy, bright petals! I have to sit while I eat so look for flowers with large petals or clusters of flowers that make a flat spot. The sweet smell of nectar helps me find my next meal.



**Hummingbird:** I may not be an insect but I do my part to help with pollination. I fly around during the day looking for bright red flowers. The flowers I like are long and shaped like a tube with the nectar in the bottom. I am quick and often eat while on the move so no need for a spot for me to sit. I simply use my long tongue to reach inside for a sweet drink as I hover.

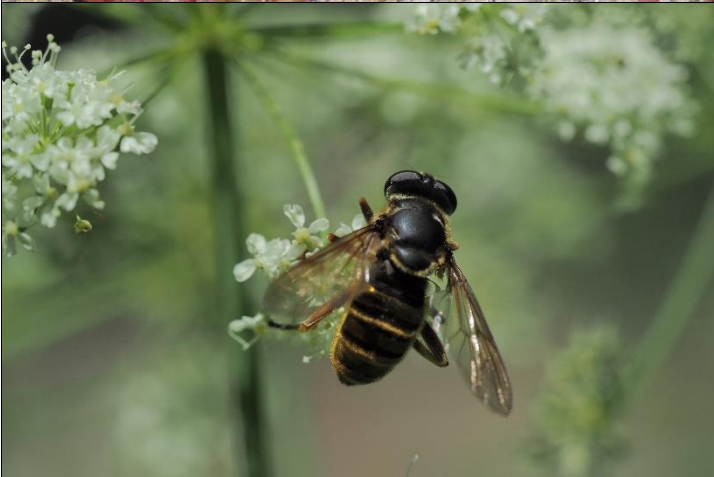




**Moth:** The cool night air is more to my liking, so the flowers I help pollinate need to open late in the evening or early in the morning. Colors are not as important to me since they can be hard to see in the dark. I watch for white or pale colored flowers that grow in clusters or may be large enough for me to sit and rest while I enjoy my meal.



**Beetle:** I spend my time hiding out under logs and leaves on the forest floor. I like to visit flowers that are low to the ground and have a wide opening that allows me to crawl inside. Because I am often dark, if I crawl on bright colored petals, I would be easy for a predator (someone who wants to eat me) to see. I prefer to find those flowers that are kind of brown and are close to the ground, sometimes even under the fallen leaves where I live.



**Fly:** Like bees, I often visit blue, purple, white or pale flowers that are open during the day. However, I don't need a sweet smell to attract me. I visit flowers that have no scent or have the delicious smell of rotting meat!



**Bat:** Compared to many other pollinators, I am pretty big, so I need a pretty big flower. I also like to sleep during the day so the flowers I visit have to be open at night. I do not care about colors. I look for flowers that have a sweet smell and are big enough for me to get my nose inside. Many of the flowers I like hang "upside down"



## Dressed for Success Flowers

