



WILDLIFE  
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# Biodiversity Adventures

## Introduction

Think of your favorite outdoor spot — maybe it's your best friend's backyard, a park near your house or the beach your family visits every year. You probably think you know that place pretty well. But chances are there are things you haven't noticed about the many plants and animals that live there.

Biodiversity is the variety of lifeforms in a certain place, and it helps keep your favorite outdoor places balanced and thriving. Exploring nature and paying attention to the plants and animals you come across is a great way to gain an appreciation for biodiversity. Thinking like a scientist as you explore will help you learn as much as possible. How do scientists think?

- Scientists **make observations**.
  - Observations are things you notice about your surroundings by using your senses.
- Scientists **ask questions**.
  - After you make an observation, what thoughts come to mind? What questions do you have about what you've seen?
- Scientists **make connections** and **find answers**.
  - Keep a journal where you can write down your observations, connections and questions. When you put your observations and connections together, does it help you answer some of your questions?
  - Read books or, with the help of an adult, look on the internet to try to find answers to your questions.
  - It's ok to not answer your questions! Just asking questions demonstrates that you're using your science skills because it means you are thinking deeply.

Do these actions sound familiar? Do you already make observations and ask questions every day? Then you are already a scientist, and you are prepared to continue exploring! The four biodiversity adventures included here will help you make observations and connections, ask questions and find answers!

The best thing about these activities? They can be done over and over again! Depending on the time of day and year, different animals will be out, and even the plants in your area may look different at different times. If you decide to keep a journal, compare your notes over time to see how nature changes with the seasons.

## **Safety First!**

Outdoor exploration is fun and informative, but certain activities can hurt people, plants or animals. Follow these guidelines to help you explore nature safely:

- Always have an adult or buddy with you.
- Wear sunscreen and bug spray.
- Pack a water bottle and snacks.
- Bring a compass, map and binoculars to help you find your way.
- Watch insects and wildlife from a safe distance and never touch them.
  - Even if something looks friendly or harmless, it is still wild and shouldn't be touched.
  - Oils and chemicals on human skin can harm many insects and animals.
- Do not touch any plants unless you know what they are.
  - Bring plant ID guides or books with you so you can double check.
- Dress for exploration!
  - Wear a hat, long sleeves, long pants, high socks and sturdy shoes.
- Leave nature as you found it.
  - Do not pick living plants.
  - Return anything that you pick up back to the same spot where you found it.
  - Stay on designated paths.
  - Do not litter or leave anything in nature that doesn't belong there.

## **Now let's go outside!**

# Color Wheel Journey

## Objective

Explore nature by looking for different colors! Every color of the rainbow can be found outdoors, although some colors are more common than others. Categorizing the things we find in nature helps us improve our observation and organization skills.

## Materials

- Printed color wheel template (on next page)
- Crayons, markers or colored pencils
- Paper clips, clothespins or tape

## Activity

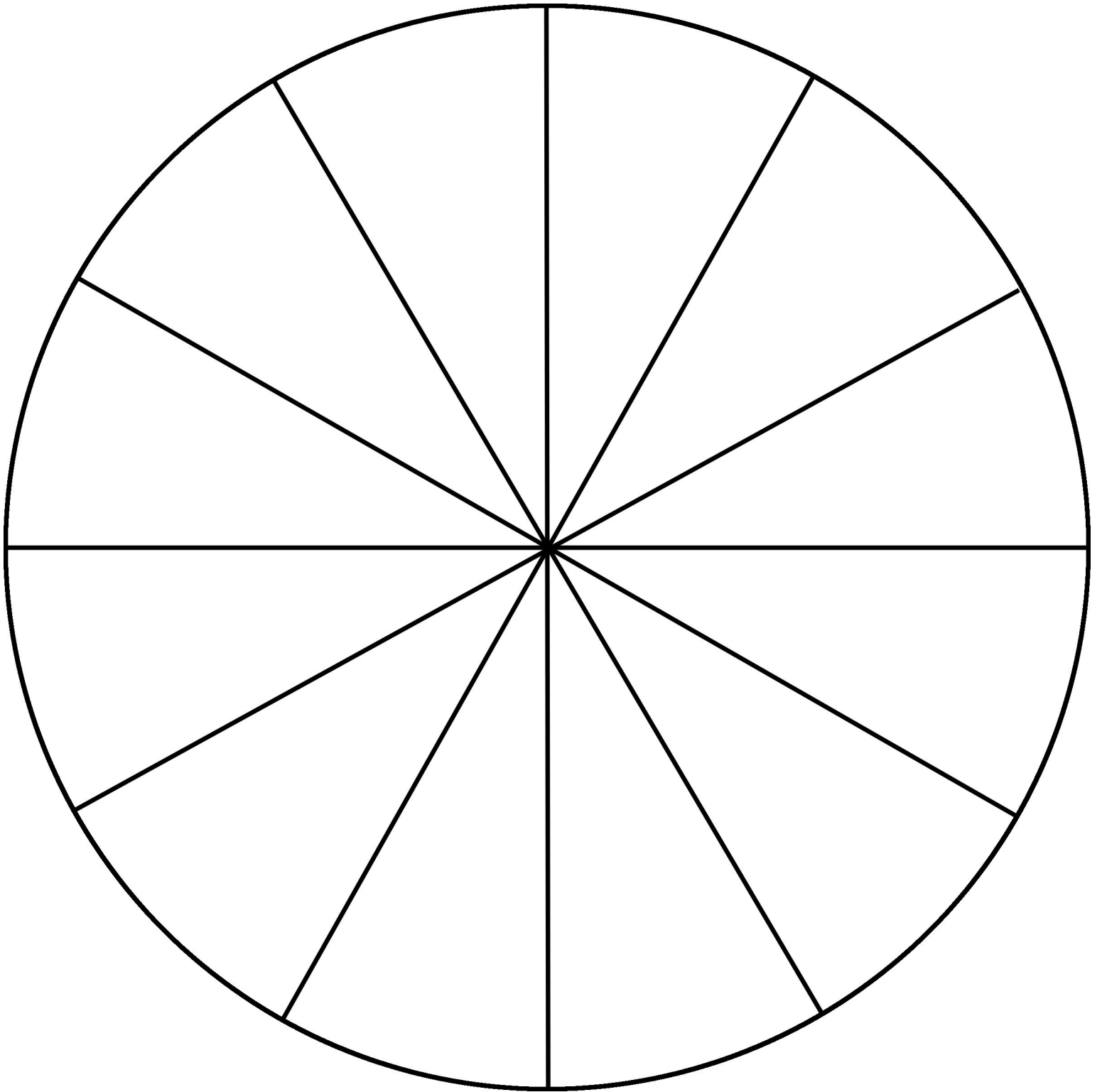
1. Print the color wheel template, cut it out and fill in each section a different color.
2. Attach a paper clip, clothespin or ball of tape onto each section.
3. Take a nature walk (make sure to follow the safety guidelines!)
4. Along the way, collect an item that matches each color on your color wheel.
5. Attach the matching items to each section of the color wheel using the paper clips, clothespins or tape.
6. Make sure not to pick any living plants and return all objects back to where you found them when you are done.

## Discussion

- Was it easy to find nature items to match all of the colors?
- What colors were easier to find than others?
- Why do plants have colors?
- Why do animals have colors?

## Example





# Sensory Eco-Exploration

## Objective

Use your senses to make observations about nature and see how diverse the world can be. Focus on your senses of **sight, hearing, touch** and **smell** — make sure not to use your sense of taste, though! It isn't safe to eat things in nature (unless it is a snack you brought from home!)

## Materials

Optional:

- Binoculars
- Magnifying glass

## Activity

Take turns focusing on each sense. Stay quiet and still to help you make observations!

- Sight
  - Spot something far away and something close.
  - Spot something big and something small.
  - Spot something moving and something still.
  - Spot something alive and something that isn't alive.
  - Spot something with three parts, five parts and more than five parts.
  - Spot something shaped like a triangle, circle, star and square.
- Hearing
  - Make “deer ears” by cupping your hands behind your ears or flip your hand to be in front of your ears to hear what is behind you. This enhances sounds!
  - Name six different sounds that you hear.
- Touch — *remember not to touch insects/wildlife and only touch plants that you know!*
  - Find something rough and something smooth.
  - Find something light and something heavy.
  - Find something bumpy and something spiky.
  - Find something soft and something hard.
  - Find something flexible and something rigid.
- Smell
  - Smell three different kinds of plants.
    - Describe the way that they each smell.

## Discussion

- How did your senses help you notice something new in nature?
- When you were quiet and still, what happened?
- Why are there things in nature diverse in size, shape and texture?
- Why do plants have scents?

# Plant Investigation

## Objective

Looking closely at plants can teach us so many things! We can notice new details as we explore the different plant parts.

## Materials

Clipboard with paper or notebook  
Pencil or colored pencils

## Activity

Find a plant to observe safely, then draw the plant, focusing closely on each part.

- **Flower**
  - How many petals does it have?
  - What shape are the petals?
  - Are there any details or patterns on the petals?
  - Does this flower have pollen on it?
  - Have all the flowers opened on this plant or are there some buds?
- **Stem**
  - Is the stem long or short?
  - Is the stem thick or thin?
  - What details do you notice on the stem?
- **Leaves**
  - How many leaves are on this plant?
  - What shape are the leaves?
  - What texture or patterns do you notice on the leaves?
  - Does the underside of the leaf look the same as the top side?
- **Roots**
  - Can you see the roots of the plant?

## Discussion

- What insects did you notice on or around the plants?
- Did any of the plants have a scent?
- Can you repeat this activity with a tree?
- Did you notice seeds near any of the plants?
- Do you know the name of the plant that you drew? If not, use your drawing to research it in books or on the internet to try and find the botanical name.
- Keep all of your plant drawings together to create your own plant ID book!

# Wildlife Quest

## Objective

It can be hard to spot wildlife because animals can move around. This activity helps us practice walking quietly and slowly so we can notice any shy or camouflaged creatures!

## Materials

Optional

- Binoculars
- Magnifying glass

## Activity

- Sit on the ground. Are there any insects crawling around you? Use your magnifying glass to look closer.
- Pause and look up. What might be flying in the air or living in the tops of trees? Use your binoculars to look closer.
- Stay very quiet and listen closely. Did anything crunch the leaves around you or make a call? Where did the sound come from?
- Gently turn over logs or rocks. What is living beneath? Once you are done observing, flip the logs/rocks back over.
- Take a slow walk and try to spot signs of wildlife on the ground.
  - Do you see any feathers or fur?
  - Are there tracks or footprints in the mud or snow?
  - Can you spot animal scat (that's a science word for poop!)?
- If you don't see any animals or insects, that's ok. You are an animal too!
  - How are you moving through nature today? Try to move like an animal or insect!
  - What different calls can you make?

## Discussion

- What types of wildlife did you see today?
- Are these creatures always in the same spot?
- If not, where do they go?
- What helps different insects and animals survive in nature?