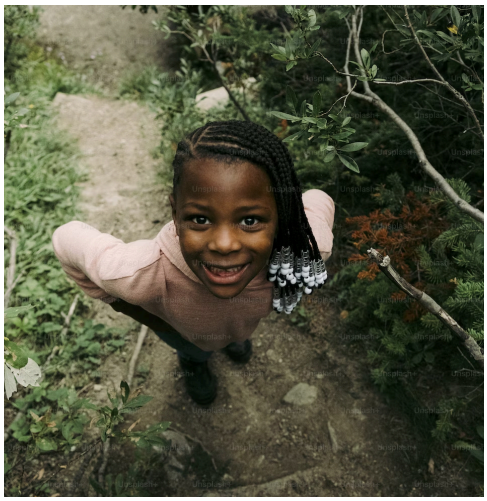
University of Minnesota Extension

# Backyard Adventures

**A 7-lesson series to get K-5 youth exploring nature!**

## Learning what your adventure can be



Backyard Adventures is a set of 7 lessons designed to immerse youth, grades K-5, in the naturescapes of their own backyards. They learn about gardens, identify plants, get to know animals, and explore how the ecosystem connects people to nature. Each lesson concludes with a picture book featuring BIPOC authors. Use these lessons in an after school, club, day camp, or any educational setting, to help children develop an appreciation for the adventures they can have in the outdoors!

## Why does it matter?

Numerous studies have shown that being outside is wonderful for all people. It promotes physical, mental, and community health.[1] It's important to see the value of our natural world, even in the city and to also recognize how going outside contributes to healthy living. When we can get young children comfortable in the outdoors, they are more likely to be good stewards of nature when they grow up.

Click here for a version of the curriculum that can be printed in full.

## What are the lessons?

Lesson 1: Playing in the Dirt (and gardening) - Youth learn about what gardens need to be healthy by starting their own mini-garden.

Lesson 2: Know a Node - Youth learn about plant identification by finding and sketching leaves.

Lesson 3: Do insects Bug you? - Youth learn to appreciate insects by collecting them using a sweep net and then exploring basic insect anatomy.

Lesson 4: Fantastic Foraging - Youth will learn to identify plants by finding and sketching the leaves of plants many people consider weeds but which are really hidden treasures!

Lesson 5: How Sweet a Bee can be - Youth learn about the importance of protecting bees by identifying them, exploring bees through pollination mimic activities, and by learning about the risks bees face (weather, animals, pesticides, poor conditions, etc).

[1] Avitt, A. (2021, March 24). *The wellness benefits of the great outdoors*. US Forest Service.

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Lesson 6: Woodland Creatures - Youth learn about the 5 main classes of animals and how they are similar and different by going on a Minnesota backyard safari!

Lesson 7: Pollution Solution - Youth learn about the invisibility of pollution, how it impacts an ecosystem, and how they can properly dispose of waste by doing a pollution simulation activity, clean-up relay, and interconnections game.

# What will I need?

Each guide has its own supply list, but here's a compiled list of all the supplies you'll need for all six activities and links to some items that you may not already have on hand..

### Introduction in each lesson:

- Nametags (preferably reusable)
- Crayons/markers/writing utensils

### Lesson 1: Playing in the Dirt (and Gardening)

- Acrylic paint markers
- Rocks to paint to label plants/write names
- Cardboard/newspaper for easy cleanup
- Dirt
- Seeds (see the list of suggested plants below for easy-to-grow/edible plant options. You can pick them, or show youth pictures and let them pick.)
- Trowels
- Small compostable planting containers for individual use
- Something to use as flower "bases" for Activity 2 (hula hoops, plates, or even trees or chairs work well—youth just have to be able to touch the object with their hand or foot to the count of 10)
- *Jayden's Impossible Garden* by Melina Mangal (here is a read-aloud version)

### Lesson 2: Know a Node

- Guardians of the Harmony cards - one set total (*Recommended to laminate and cut out, as they'll be used in many other lessons in this series)*
- Leaf rub handout - one per person
- Crayons
- Leaves of Three handout - one per person
- Leaf sort chart and cards (p. 6, 7), one set per person, printed & cut out *(recommended to laminate both sheets if planning on doing this with future groups)*
- Optional: timer
- *Nell Plants a Tree* by Anne Wynter (here is a read-aloud version)

### Lesson 3: Do Insects Bug you?

- Sweep Nets - one per person

- Small clear containers to observe bugs close up 1 per pair of people
- One Insect ID poster. Info can also be found at U of MN site
- Printed pictures of bugs
- Guardians of the Harmony cards
- Closing book: *The Grasshopper & the Ants* by Jerry Pinkney (here is a read-aloud version)

## Lesson 4: Fantastic Foraging

- Icebreaker Treasure Hunt pictures - 1 set, cut into individual pictures, #1-15 (laminate if using again), for intro activity
- Foraging Guide - 1 per person (best if stapled)
- Pen
- Guardians of the Harmony cards - one set total
- Writing utensils - 1 per person
- Closing book: *A Day with Yayah* by Nicola I. Campbell (here is a read-aloud version)

## Lesson 5: How sweet a bee can be

- Tiny vibrating motors (DC 1.5V 3V, about 6mm x 10mm) - 1 per person
- Batteries (the smaller the better, AAA works fine) - 1 per person
- Conductive tape to make better connection between batteries & motor wires *(prep tip: to make it easier, consider applying the tape to the ends of the motor wires yourself before the session)*
- Watercolor paint - 1 set for every 3 or 4 youth
- Water
- Paper (paint paper recommended) - 1 per person
- Acrylic paint pens/markers/ crayons etc - 1 per person
- Printed bee guide - 1 per person
- Guardians of the Harmony cards - 1 set
- *The Thing About Bees* by Shabazz Larkin (here is a read-aloud version)

## Lesson 6: Woodland Creatures (Animals)

- Phylum chart cut-outs (printed on cardstock or laminated) sorted into 8 different colored bags bags
- Woodland Creature Guide for each child (best if stapled)
- Pen
- *Climb On!* by Jaqueline Alcántara (here is a read-aloud version)

## Lesson 7: Pollution Solution

- A way to share pollution photos (printed or projected)
- Small glass jars - at least 2 per group of 2-3 people
- Red food coloring (a piece of Skittles® candy works too)
- Spoons to gradually dilute polluted water
- Water - enough to fill each jar
- 3 cans, marked “garbage,” “compost,” or “recycling”

- Various clean garbage items (for clean-up relay):
    - Compost items (e.g., apple cores, banana peels—any plant-based item. Animal based food items can be composted in some places, but they make the compost smelly. If using real compost items, supply gloves. Or you can use paper cut-out shapes of these items to represent the items)
    - Recycle items (e.g., cans, plastic, cardboard) Plastic with 1, 2 and 5 can be recycled *[make "I Love You sign and count from thumb to pinky 1, 2 (skip 3, 4), and 5 to help remember* 🤟🏾*]*
    - Garbage items (e.g., plastic bags, styrofoam, small plastic items like plastic utensils or straws)
- Guardians of the Harmony part 3 cards cut out (This set adds 4 cards to the original set used in lesson 1—hawk, pollution, plastic, bug. Recommended to laminate)
- *Listen to the Language of the Trees* by Tera Kelley (here is a read-aloud version)

# Safety & other considerations

Allergies!

- Some people are allergic to bugs, stings, animals, and even plants.
- Be certain to have paperwork citing allergies and medical conditions.
- Be sure to ask, especially before looking for any insects/pollinators if anyone has allergies to bugs.
    - If there's an issue with allergies, you will have to make accommodations or vary the lesson plan

Reusability

- The Guardians of the Harmony game is used many times in this series. Print & laminate the pieces to reduce waste.
- Name tags should be reusable.
- Leaf Sort (lesson 2) can be printed and laminated for future use.
- Printed/laminated bug pictures for "Do insects Bug you" (lesson 3) reduces waste.
- Printed/laminated phylum charts for "Woodland Creatures" (lesson 6) is helpful to reduce waste

Watercolors

- In lessons that use watercolors, be certain to bring a plastic bag to transport wet paint

Bee activity

- Be certain to test your setup before doing the activity. Prepping all motors with conductive tape ahead of time will make the lesson go more smoothly..

# Acknowledgements

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