

*A sneak peak of some of our curriculum from the upcoming second edition of the “Kids and Bees Guidebook: Ideas and Inspirations for Teaching Kids About Bees.”*

### **Nature Journaling: Buzzing with Bees**

In this lesson students will explore their surrounding area to identify bees and the flowers the bees pollinate. They will utilize a nature journal to record their observations. The lesson will finish sweet with honey tasting from local hives. This lesson was developed with guidance from [How to Teach Nature Journaling: Curiosity, Wonder, Attention](#) by John Muir Laws and Emily Lygren.

This lesson can also be adapted for a homeschool group, or a parent and their kid(s).

#### Lesson objectives

Students will be able to

- Describe the interconnectedness between people, bees, and flowers
- Make the connection between honey and the surrounding environment
- List a variety of bee species
- Explain that bees pollinate flowers, and many of these flowers become food for people and wildlife
- Develop social/emotional self-awareness and self-management skills to achieve school and life success

#### Teaching Points

- How to utilize a nature journal to record observations
- How to safely catch and identify bees
- How to taste honey to identify specific flavors and floral resources

#### Time

Allow at least 60 minutes for this activity and be mindful of transition time. When students are engaged, they may even want to spend over an hour in the field. This lesson can be repeated multiple times during the year to observe changes in bee populations and flower phenology.

#### Materials

- Nature journal (can be any notebook)
- Pencil
- Colored pencils
- Clear containers for catching bees (clear condiment containers, or clean peanut butter jars work great)
- Guidebooks for local flowers and bees
- At least two varieties of local honey (with known nectar source)
- Sticks for tasting honey (toothpicks, coffee stir sticks)

#### How to run the lesson

- Explanation – begin the lesson by letting students know that they will be studying bees today, as well as the flowers bee pollinate, and of course, honey!
- Small group discussion and metadata (we include asking students to name their emotions as part of the metadata)\*
  - Ask the students to break in to small groups (approx. 5 children)
  - Ask the students to share, in their small groups, one thing they know about bees, and one thing they wonder about bees
  - Ask the students to open their nature journals and record their “metadata” -
    - Date
    - Time
    - Location (country, city, place)
    - Weather
    - Feelings (happy, calm, silly, loved, sad, tired, excited, scared, board, hopeful, angry, disappointed, proud, stressed, annoyed, worried, surprised, lonely, confident, confused, anxious, frustrated, friendly)
- Whole class discussion
  - Ask the students
    - To share anything they would like from their small group discussions
    - To name their feelings
    - To explain pollination
    - To name some local foods that bees pollinate
    - To name different types of bees we may see on our walk

### Activity

- Gather the students and head to a near-by area with plenty of flowers hosting bees
- Invite the students to take a seat and choose a flower or a bee to study (if they would like t to catch a bee, provide them with a small container to hold their bee while they observe it)
- In addition to including metadata, use these techniques to guide the students’ journaling:
  - Find one thing to focus on per entry (a seed, the soil, a specific flower, or catch a bee or butterfly in a jar for a good long look) and include it as a prominent title on the page.
  - Use words, pictures, and/or numbers to record observations.
    - Practice observational drawing by describing observations out loud (e.g. “the bee is black with two yellow stripes on her abdomen,” “the flower has a dark green stem which is very thin,” “the petals are delicate and pink, with flecks of yellow pollen on them”) and then drawing or writing about what you described out loud.
    - Remember that the drawings in a nature journal don’t have to be pretty or polished -- instead, focus on including as much information as you can!
    - Use arrows and labels to clarify interesting parts of your drawing.
    - Explore how you can include numbers in a journal entry. For example: how many leaves does the seedling have? How many centimeters tall is it? How many stripes are on the bee? How many times did the bee land on this particular flower?

- Answer these prompts: “I notice...”, “I wonder...”, and “It reminds me of...”
  - “I notice...” helps you focus on observations that you make. Remember that we can observe with our ears, nose, and fingers in addition to our eyes!
  - “I wonder...” helps you get curious about what you’re observing. Write down every question you can think of. Put a star by the questions that you might want to research later, or that you think you might be able to answer by observing your plants and pollinators some more!
  - “It reminds me of...” helps you connect your flower and bee observations to other experiences that you’ve had, which makes it easier to remember the new things you’re observing.
- Invite students to connect their feelings to specific natural phenomena, for example: “I’m nervous because I am afraid of bees,” “I’m happy because I love the feeling of sunshine on my face,” “I’m bored because I’d rather be playing games and this plant is not interesting to me right now.” All feelings are valid!
  - Close out each journaling session with a gratitude (or, two, or three!). This can be a thankful expression for the natural phenomenon they observed, something else they notice in the location, time with their friends, something new they learned or felt today, etc.
  - Note that students may use multiple pages for each entry.
- Invite the students to release their bees, and to take a good whiff of the surrounding flowers
- Walk back to the classroom for honey tasting
  - Ahead of time, write the following on the board:
    - Fruity
    - Spicy
    - Woody
    - Nutty
    - Floral
    - Earthy
    - Burnt
    - Fresh
    - Citrusy
    - Chocolaty
  - Give each student two tasting sticks. Explain that they will use each stick one time (no double-dipping!) and demonstrate the appropriate amount of honey to scoop for each sample.
  - Send the first variety of local honey around the room (or divide into smaller jars, if you have a large group – one jar of each variety per 15 students is sufficient) for students to collect their sample
  - Ask the students if they taste any of the flavors of the flower scents from their walk. Then refer to the list on the board and ask if they taste any of those flavors, and invite them to come up with their own words to describe the honey’s flavor.
  - Repeat the process with the second honey

### Review

- Ask the students

- If there is anything they would like to share from their nature journals
- To share what their favorite part of the day was
- To share one new thing they learned about bees, flowers, or honey today
- To name their emotions again (they often change!)

\* Naming your emotions can be a very personal exercise. We recommend putting your meta data in the top left corner of the left page, or top right of the right page. This way, the student can dog-ear the page to cover their feeling words if they would not like other students to look on. While grading the nature journal, if you find a child is having troubling emotions, this is a great opportunity to check in with them and follow up in private.

### Community Science Extension

Consider joining "[Budburst](#)," a community-focused, data-driven approach to plant conservation. Budburst is a collection of researchers, educators, gardeners, and community scientists working together to illustrate the human impacts on the natural world around us. They have a variety of opportunities for students to get involved in projects and activities as a group or individually. See the Appendix resources for more information.

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