Flipping Through Nature: Card Decks to Guide Outdoor Exploration

EXPLORING FLOWERS

Preparation and Engagement Guidance

Looking at flowers closely can be exceptionally cool. Many flowers catch the attention of pollinators, inviting them in. This tends to make flowers eye-catching and intriguing for humans to admire, too. It can be fun to compare colors and shapes of flowers and check out the living things on flowers that may be pollinating them. Plants that are pollinated by wind also have flowers, but they tend to be less showy. This card deck will guide learners through the different colors, markings, shapes, smells, and phases of flowers; it does not provide information on identifying specific flower names, except for encouraging learners to use local flower guides or apps, such as Seek or iNaturalist, to learn flower names.

Target audience: This activity is best for learners 6-years-old and older, or younger learners with adult support.

Materials

- a printed copy of this document to refer to during the activity
- appropriate number of Exploring Flowers flip card decks for your organization (depending on how many learners you expect to use them)
- 2-3 magnifiers for the table (more if you are offering them to learners to borrow while they explore)
- · 1-2 flower samples
- · (optional) a regional guidebook to flowers
- · (optional) 1 printed activity sign
- (optional) 1 clear plexiglass menu stand to display the activity sign

Preparation

If this is your first time using Flip Cards, review Flip Card Activities: Background Information for more information on preparation, materials to support learners, and engagement guidance. The following steps are our recommendations and should be customized for your site and program.

- 1. Print sets of the Flip Card activity.
 - a. We recommend printing on cardstock and/or laminating for ongoing use.
 - b. Print each card in color, single-sided, actual size.
 - c. Cut each individual card to the 4" x 6" trim size. (Use the inner set of crop marks as your guide.)
 - d. Hole punch the circle in the top-left corner of each card.
 - e. Use a book binder ring (½" to 1") to collate each card deck.

- 2. Try out this activity yourself! Your experience using this flip card deck in the space in which learners will use them will help you share specific examples and point learners to interesting things to look at.
- 3. Review and customize the Engagement Guidance (on the next page). Think about your space, your audience, the time you will have with learners, and how you might want to best engage them.
- 4. Make sure you have enough flowers to observe in your outdoor nature area. Lots of flowers is great, but you only need a few for the activity to be interesting.
- 5. On the day you will be sharing this flip card deck with learners:
 - a. Gather 1-2 flower samples to engage learners.
 Flowers from succulents tend to dry out more slowly and last longer.
 - b. (optional) Place the large activity sign on the menu stand on the table. (The activity sign is a large version of the first card in the deck.)
 - c. Place sets of the Flip Card activity on the table. If you're not using the large activity sign, place the first card of each set facing up. If you are using the large activity sign, place the second card of each set facing up.
 - d. Place the flower samples and magnifiers on the table near the flip card decks.

EXPLORING FLOWERS

Preparation and Engagement Guidance (continued)

Engagement Guidance

Here is an example of how you might engage learners at the beginning of their experience when they first show interest in an activity, as well as after they complete the activity. The first time you use the *Exploring Flowers* activity, we recommend trying out some of the suggested language (in italics, below) and then customizing it.

At the beginning:

- · Point out the flower samples on the table and offer:
 - Do you want to check out these flowers through a magnifier? They can look totally different than what you see with your naked eye.
 - · What do you notice? What does it remind you of?
- If you're interested in exploring more flowers, take this flip card deck with you into the outdoor nature area. The cards will guide you to explore and learn about flowers, but it won't tell you the names of the flowers here. It can be fun to explore flowers before learning their names.
 - · (if applicable) When you get back, I can share some tools to identify the flowers you find.
 - · (if applicable) Do you want to take a magnifier with you?
- Say something about the status of flowers in your nature area at the moment. Are there lots, a few, etc.? If, at the time, there are very few flowers in your outdoor nature area, let learners know before they go out that at this time of year, there are flowers to explore, but they'll need to search to find them. Also, let learners know the time of year when there will be more flowers present.

At the end:

- · What did you discover?
- · Which different shapes, colors, patterns, kinds of flowers did you find?
- Did you find any other living things in flowers? Why do you think they were there?
- Do you have a photo of a flower to share? What do you find interesting about that flower? What do you find interesting about any other flowers you found?
- (if you have applicable guidebooks or resources to share) Do you want to use this guide book to try to identify some of the flowers you found?
- · Where else do you think you could find flowers to observe?
- · Ask some reflective questions, such as:
 - · What is something interesting about flowers that you learned?
 - What surprised you during the activity?

Flipping Through Nature: Card Decks to Guide Outdoor Exploration

EXPLORING FLOWERS

Photograph and Illustration Credits

| Card | Citation |
|-----------------------------------|---|
| All illustrations by Kate Rutter. | |
| 1 | Photo courtesy of the University of California at Berkeley and The Lawrence Hall of Science. |
| 2 | "Green and yellow flower" photo by <u>Théotim Thoron</u> on <u>Unsplash</u> ; "Many-clustered flower" photo by <u>Yoksel</u> <u>Zok</u> on <u>Unsplash</u> ; "Flower with three petals" photo by <u>Brian Yurasits</u> on <u>Unsplash</u> . |
| 3 | "Blue flowers" photo by Kevin Beals courtesy of the University of California at Berkeley and The Lawrence Hall of Science; "Thin-petalled flowers" photo by <u>Yoksel Zok</u> on <u>Unsplash</u> ; "Single flower" photo by <u>László Glatz</u> on <u>Unsplash</u> . |
| 4 | "White-and-purple flower in shade" photo by Emilie Lygren; "White-speckled flower" photo by Kevin Beals. Both photos courtesy of the University of California at Berkeley and The Lawrence Hall of Science. |
| 5 | "Bell-shaped flowers" photo by <u>Jonathan Tales</u> under <u>Attribution Non-Commercial Creative Commons License</u> ; "Roses" photo by <u>Alex Seinet</u> on <u>Unsplash</u> ; "Disc-shaped flower" photo by <u>Andrea Tummons</u> on <u>Unsplash</u> ; "Cross-shaped flower" photo by <u>Daniel Cahen</u> under <u>Attribution Non-Commercial Creative Commons License</u> ; "Tube-shaped flower" photo by <u>Ricardo Ayala</u> under <u>Attribution Non-Commercial Creative Commons License</u> . |
| 6 | Photo courtesy of the University of California at Berkeley and The Lawrence Hall of Science. |
| 7 | "Five insects" photo by <u>Marie Delport under Attribution Non-Commercial Creative Commons License</u> ; "One insect" photo by <u>Urszula Kaźmierczak</u> on <u>Unsplash</u> . |
| 8 | "Bee and pollen" photo courtesy of the University of California at Berkeley and The Lawrence Hall of Science; "Hummingbird" photo by <u>Vijayalakshmi Nidugondi</u> on <u>Unsplash</u> . |
| 9 | All photos by Kevin Beals courtesy of the University of California at Berkeley and The Lawrence Hall of Science. |
| 10 | All photos by Kevin Beals courtesy of the University of California at Berkeley and The Lawrence Hall of Science. |
| 11 | "Berry" photo by <u>Anna Evans</u> on <u>Unsplash</u> ; "Pink flowers" photo by <u>Camilla Bundgaard</u> on <u>Unsplash</u> . |
| 12 | Photo by Kevin Beals courtesy of the University of California at Berkeley and The Lawrence Hall of Science. |
| 13 | "Long purple flowers" photo by <u>Naomi Irons</u> on <u>Unsplash</u> ; "Insects on yellow flower" photo by <u>Joshua J.</u> <u>Cotten</u> on <u>Unsplash</u> . |
| 15 | Photo by <u>Dillon T.</u> on <u>Unsplash</u> . |
| 16 | Photo by Kevin Beals courtesy of the University of California at Berkeley and The Lawrence Hall of Science. |