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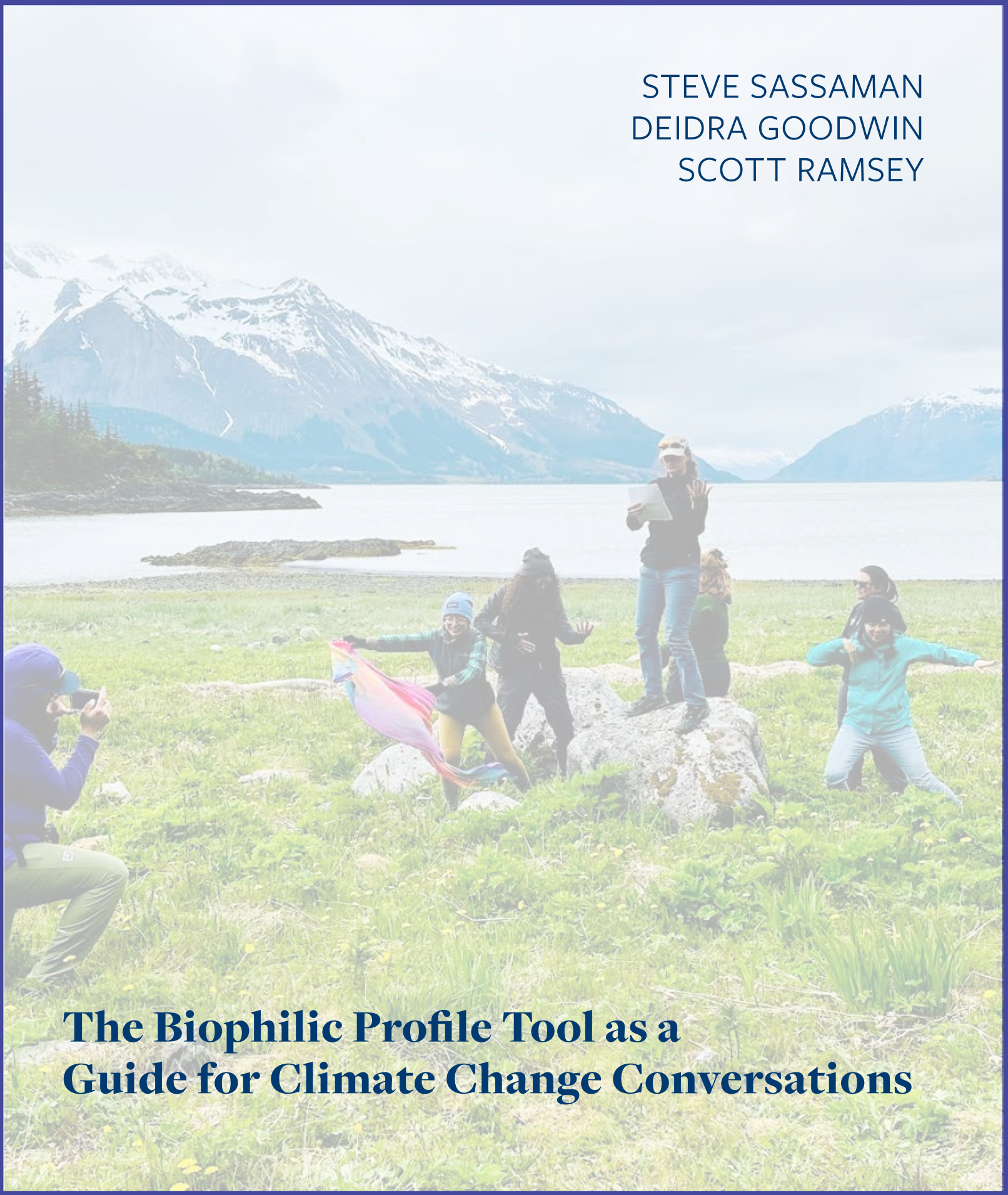

The Biophilic Profile Tool as a Guide for Climate Change Conversations

ABSTRACT

Participation in recreational activities in parks and protected areas can inspire both climate change awareness and advocacy by encouraging healthy engagement with nature. However, programming must align with the various ways we relate to nature to be effective. One strategy of alignment is to employ the Biophilic Profile tool, an education survey adapted from the Kellert-Shorb Biophilic Values Indicator (KSBVI). Emerging from the Biophilia Hypothesis, the KSBVI has been utilized by the authors to screen participants before programs to develop curricula that better cater toward participants' preferred values. The activity guide we present here has multiple activities that can be facilitated in the field for a range of participants. Through the implementation of the Biophilic Profile tool, the authors have found a heightened awareness of nature-connectedness in participants and have been able to guide deeper conversations surrounding climate consciousness by effectively matching relevant activities that strengthen these relationships with nature.

THE BIOPHILIC PROFILE TOOL AS A GUIDE FOR CLIMATE CONVERSATIONS

Each of us has a unique relationship with nature, the more-than-human world, shaped by our diverse experiences and cultural backgrounds (Kellert and Wilson 1995). Despite these differences, research indicates that outdoor recreation typically is crucial in enhancing one's overall connection with nature (Puhakka 2021; Morse et al. 2022). Delving into the nuances of this connection can provide valuable insight into which specific activities are most effective in fostering and deepening this bond. The authors use "more-than-human" throughout this paper, a term coined by David Abram to emphasize that humans are not superior to other aspects of nature (Abram 1996). In practice, especially during shorter programs, using this term may distract participants from the core learning objectives, thus we may use the term "nature" instead.

One framework for exploring these intricacies is the *Biophilia Hypothesis*, which emphasizes that humans have an innate love of life and encourages them to recognize that they are a part of, rather than apart from, nature (Kellert and Wilson 1995). The hypothesis, created by E.O. Wilson and Stephen Kellert, suggests that our relationship with nature is the amalgamation of 10 typologies or unique values, each with its range of emotional, intellectual, and physical connections to the natural world (Kellert and Wilson 1995). They are *aesthetic, humanistic, naturalistic, utilitarian, scientific, negativistic, dominionistic, moralistic, symbolic,* and *spiritualistic*.

Building on the theoretical framework, Kellert, Shorb, and Schnoeker-Shorb created the Kellert-Shorb Biophilic Values Indicator (KSBVI; Shorb 2010), an educational tool designed to better explore the nuanced ways people connect with nature in a practical sense. To increase accessibility, Ramsey and Sassaman adapted the KBSVI to -create the Biophilic Profile tool, a web-based survey available via biophilicprofile.com. The website hosting the tool offers participants a snapshot of their scores across each biophilic value and valuable insights into the corresponding typologies. The tool invites and encourages critical self-reflection by visitors to deepen their understanding of their connection to nature. For a growing network of practitioners, administering the survey before outings affords a unique perspective on participants' biophilic tendencies, allowing for meaningful insights into aligning programming to meet students' needs. Furthermore, by leveraging assessment results, educators and program directors can effectively tailor their curricula to support participants better, fostering a deeper connection with and care for the more-than-human world. This type of tailor-made programming can be particularly valuable for climate education, which needs to find ways to bond "over the values we truly share," so that, "by connecting them to climate, we can inspire one another to act together to fix this problem" (Hayhoe 2022).

Each author of this paper has integrated the Biophilic Profile tool and one or more of the following activities into a variety of programs, including multi-week college courses (both graduate and undergraduate), one-day immersive workshops for youth, extended field experiences, nature-based wellness continuing education series as a part of the Osher Lifelong Learning Institute (2025), and adventure-based therapy interventions.

OVERLEAF **Students are performing their shared poem during a graduate-level field course in Alaska, which is co-instructed by Author 1 and Author 3. The students chose to add movement in addition to reciting the words. (See also Figure 3, Activity Guide F.)** STEVE SASSAMAN

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ACTIVITY GUIDE

Understanding which values score high for both the participants and the program facilitators is critical in guiding an approach that fosters a greater sense of connection to one's more-than-human kin. For example, while co-instructing a graduate-level field course with the authors, Sassaman, who scores highly in the *aesthetic* and *spiritualistic* values, walked at a slower pace in the back of the group with those who also wanted to take time capturing photographs or appreciating the flora encasing the trail. In contrast, Ramsey, who scores highly in *scientific/reasoning*, led the front of the group and eagerly identified plants with special consideration for describing the utility of each. There was support in the group for engaging in an Honorable Harvest Approach, a set of principles outlined by Robin Wall Kimmerer (2020) to offer gratitude and minimize harm to the environment while sampling various plants. This *moralistic* process connected *scientific* to *utilitarian* and *naturalistic* values. The self-awareness and assessment of the group allowed for a shared experience with individualized attention, creating a space for all to feel included and strengthen their connection according to their preferred values. When the group assembled at lunch, it engaged in a discussion that allowed each participant to share their perspective with others. During the second part of the hike, this encouraged participants to experiment with a different approach that resonated with some of their lower-scoring values.

The following activities are presented in order (A–G) of a recommended flow. The activities can be facilitated in both a frontcountry environment and on extended programs in the backcountry. Though the authors prefer to facilitate activities in the backcountry, providing more accessible urban programs can not only reach more people but also reinforce the concept of connectedness to the more-than-human realm in these communities. Depending on the duration of the program, each activity can be spread out over multiple days. Though some activities may appear to be anchored in *aesthetic* value, effective processing can help participants connect with values that might be perceived negatively, such as *utilitarian* and *dominionistic*, by emphasizing the positive outcomes of healthy expression of these views.

CONCLUSION

Activities A–G provide a framework for deepening participants' connection with the more-than-human realm. By centering the biophilic value framework, participants may feel more welcome to have meaningful conversations surrounding climate consciousness as their values are taken into consideration as a part of the discussion. Conversations surrounding climate change advocacy often neglect the full spectrum of how individuals value their connection to the more-than-human realm, often focusing solely on *moralistic* and *scientific* arguments. This tendency to take a position that is not fully inclusive of all perspectives may reinforce the aversion to climate advocacy and foster messages of denial that climate change will directly impact one's life. The authors believe that providing opportunities for healthy engagement with nature plays a vital role in enhancing one's sense of care and advocacy. The activities described in this guide have led to many critical conversations and have inspired continued advocacy. We hope that you will utilize this framework to enhance your programs and are always open to integrating new approaches to our work.

(Activity guides and References continue below)

ACTIVITY A: CIRCLE AND IMPACTS

Learning outcomes:
Upon completion of this activity, participants will be able to:

- Identify how their actions impact others
- Develop a sense of community with the group
- Describe the importance of trust in fostering group success

Preparation time: 5–10 minutes
Materials needed:

- 15 feet of 2-foot tubular webbing (this can be increased for larger groups)

Activity time: 10 minutes

INSTRUCTIONAL SEQUENCE DESCRIPTION

This is an effective opening activity that can be integrated into the start of a program as participants are coming together. This is a variation on a series of activities found in Cain and Smith's *Book of Raccoon Circles* (2002). This activity helps participants understand how their actions impact others and sets a collaborative tone for the beginning of a program. The activity works well as a way to harness the energy of a youth audience and also encourages active engagement from older adults who may be hesitant about physical activity. We recommend that it be offered in a sequence following an icebreaker activity that provides space for participants to connect in pairs or trios before bringing together the larger group.

Setup: Tie the webbing together using a water knot.

Ensure there is sufficient tail as the participants will be weighting the webbing throughout the activity. Form a circle with the webbing and invite all participants to pick up the webbing. Have the participants slowly create tension on the webbing so that it is taut. Invite the participants to lean back on the webbing and observe what occurs. As the

FIGURE 1. A group of undergraduate college students completing a raccoon circle variation facilitated by Sassaman. Students chose to close their eyes to heighten the feelings of their actions. STEVE SASSAMAN

participants gain comfort trusting the webbing, challenge them to lean back farther and ask what they are noticing. As you observe the group getting comfortable with the process you can add the following:

Group Squat: Ask the group to fully hold on to the webbing while maintaining tension, and squat together as a group. While maintaining tension, have them stand up together. To add more playfulness to the activity, add a sound effect such as a sigh of relief.

One-Arm Extension: After the group completes a few squats, invite participants to reach out with their right arm while holding tension on the webbing. Again, feel free to encourage some sound effects. Follow the pattern with the left arm.

Sit Down and Stand Up: After the group completes a few other exercises, invite them to sit down together without releasing tension on the webbing. Once seated, invite them to stand up together. It is critical that tension remains on the webbing and that they coordinate the stand-up together.

Participants' Choice: A strategy to emphasize that the instructor is a part of the co-learning circle is to invite participants to suggest a move of their own. Be sure to observe the safety of the proposed move and the comfort of participants.

Facilitator (ask): What did we notice about our circle? What would happen if any of us made any exaggerated moves or did not commit to maintaining full tension?

Facilitator (say): Consider how our actions impact others. When we are all fully committed, we can maintain balance. We have to observe the needs of others and lean into the process in order to be successful. As we go on this journey together, I invite us to consider this activity in helping to support our process together.

ACTIVITY B: INTRODUCTION OF BIOPHILIC PROFILES: BUILDING EMPATHETIC COMMUNITY

Learning outcomes:
Upon completion of this activity, participants will be able to:

- Identify their biophilic values
- Describe how their biophilic profile influences their approach to nature engagement
- Examine the differences in how others connect with the environment

Preparation time: 10 minutes
Materials needed:

- QR code or link to biophilicprofile.com
- Journal (*outdoor guide*)
- Writing utensils

Activity time: 50 minutes

BACKGROUND CONTEXT AND INSTRUCTIONAL SEQUENCE DESCRIPTION

This is not necessarily a one-time activity, but rather a way of utilizing the Biophilic Profiles tool throughout a course or experience with multiple dates. In this particular example, the timeline outlined below was used in an 8-week elective course for undergraduate students of all levels at Brevard College called "Outdoor Experiences." One of the learning objectives of this course is that students will be able to describe how they and others connect with the outdoors and nature in various ways. Similar approaches have been taken with courses at Arizona State University, Prescott College, and Temple University. The biophilic values provide a shared vocabulary for students as they explore the above learning objective and are often identified as a favorite takeaway from the authors' course overall.

INTRODUCTION TO BIOPHILIC PROFILES

During this initial class meeting, the students are given time to complete their biophilic profile and note their scores to share with their co-learners. The authors have found it more effective to provide time within the session to complete the profile after some introductory activities and space-centering exercises.

Throughout the 8-week course at Brevard College, students were asked to keep an outdoor guide, which is a reflective journal that students complete during the duration of the course. The instructor provides prompts to help summarize course content in a way that supports the development of their final projects. The first and last prompts related to biophilic values serve as a pre- and post-assessment. They occur in the first and last week of the course. For shorter programs, these prompts can be facilitated in the form of a discussion; however, the authors have found that providing time for introspection deepens student self-awareness and enhances their ability to share their reflections with the larger group.

Initial journaling prompts (used to guide pre- and post-assessment activity):

- What were your biophilic values (in order)?
- Did the results surprise you? Write out quick descriptions of your first, best, and last memories of connecting with the outdoors.
- What biophilic profile best matches up with your perspective at the time? (Could be one of your main ones from the assessment or another that didn't emerge as a top score.)

For the outdoor guide, which is used for the duration of the eight-week outdoor experience course, there are additional prompts that relate to the other course content. For the purpose of this activity guide, the authors are focusing on the activities that explicitly relate to biophilic profiles.

ACTIVITY C: BIOPHILIC PROFILES AND NATURE ENGAGEMENT

Learning outcomes:
Upon completion of this activity, participants will be able to:

- Deepen their understanding of their personal biophilic profile
- Describe how their biophilic profile influences their preferences for outdoor recreation
- Examine how understanding others' biophilic values may influence park protection strategies

Preparation time: 10 minutes
Materials needed:

- Outdoor activity images (Print and laminate/use plastic sleeves for continual outdoor use)
- Journal (*outdoor guide*)
- Writing utensils

Activity time: 90 minutes

INSTRUCTIONAL SEQUENCE DESCRIPTION

During the second week of Brevard College's Outdoor Experiences course, students visit the Carl Sandburg Home National Historic Site. This is the first field trip for students because it is an atypical outdoor setting. The choice of this location illustrates a historic home that integrates biophilic design. The activity described can take place at any location, but Goodwin uses this approach to reinforce the interwoven human and natural histories that may strengthen students' sense of place. In this activity, students engage in a modified version of the activity featured in the Wilderness Society's Public Lands Curriculum (2025), in which they use images of people engaged in various outdoor activities in a range of environments. There are several images included in the Public Lands Curriculum, but facilitators may also use their own images.

Students are asked to choose images that illustrate:

- Their first outdoor/nature memory;
- Their favorite memory outdoors/in nature;
- The way they spend the most time outdoors/in nature now;
- The image they do not think is "outdoorsy."

After the prompts are given, the participants' biophilic profiles are reviewed. The intent is to further recognize how individual preferences for biophilic values may influence their approach to outdoor recreation. Students are asked if, in the memories they shared, they see their most prevalent value present. After the fourth prompt, students are asked (for their respective chosen image) which biophilic value they believe is most prevalent for the folks in their image.

Once these discussions are complete and students have a better understanding of each value. To practice critically thinking about the ways in which people engage with the outdoors and nature, the facilitator chooses an image at random and asks the students to reflect on how someone with each value as their most prevalent might interact with the scene. For example, if the image depicts a scene of someone rock climbing, ask students to describe how someone who has a prevalent *negativistic/aversion* value might approach that experience or how someone with a *utilitarian* value may approach it. There are no right or wrong answers; the intention is for students to begin reflecting on and empathizing with different experiences and perspectives.

The final engagement point is a brief introduction to Carl Sandburg and his legacy. Students will be asked what biophilic values they believe were most prevalent for him and why. It often does not take them long to identify Sandburg's orientation to *symbolic*, *aesthetic*, and *spiritualistic* values. This activity can be adapted depending on location. Often, the *dominionistic* value may become omnipresent as students examine the name and legacy of specific park sites.

ACTIVITY D: THE NATURE OF RECIPROCITY

Learning outcomes:
Upon completion of this activity, participants will be able to:

- Express the importance of reciprocity in everyday life
- Develop enhanced engagement with their more-than-human kin
- Explain the importance of gratitude
- Examine how their breath plays a critical role in the global community

Preparation time: 5 minutes
Materials needed:

- The activity itself requires minimal materials. A journaling activity is recommended to inspire deeper reflection and provide space for those who may be less comfortable sharing as a part of a larger group.
- Pocket notebook
- Pens or other writing utensils

Activity time: 50 minutes

INSTRUCTIONAL SEQUENCE DESCRIPTION

This is a mindfulness activity and provides an opportunity for participants to deepen their connection with another sentient being and enhance their understanding of the importance of reciprocity in sustaining our lives and the world around us (Kimmerer 2020).

Reciprocity Meditation—20 minutes (time can be shortened or lengthened depending on group needs)
After a brief introduction to one another (if used as a stand-alone activity), explain that we will engage in a 20-minute meditation to enhance our relationship with a leafy being. Explain that you will be reading a quote by Dr. Robin Wall Kimmerer from her book *Braiding Sweetgrass* as a primer for their interaction with a leafy being.

Facilitator: I invite you all to take a deep breath with me. Inhale. Hold. Exhale. Again. Inhale. Hold. Exhale. As we home in on our breath, I invite you to close your eyes as I read this quote from *Braiding Sweetgrass* by Dr. Robin Wall Kimmerer:

Know the ways of the ones who take care of you, so that you may take care of them.
Introduce yourself. Be accountable as the one who comes asking for life. Ask permission before taking. Abide by the answer.
Never take the first. Never take the last. Take only what you need.
Take only that which is given.
Never take more than half. Leave some for others. Harvest in a way that minimizes harm.
Use it respectfully. Never waste what you have taken. Share.
Give thanks for what you have been given.
Give a gift, in reciprocity for what you have taken.
Sustain the ones who sustain you and the earth will last forever.

Facilitator: Pause a moment and let the participants absorb the insight offered by Kimmerer.

Facilitator: In thinking about this concept of reciprocity, I invite you to explore the area and identify a leafy being whom you connect with. Once identified, gain their permission and exchange the carbon dioxide you exhale with the life-giving oxygen they provide. Spend time in this reciprocal process until I invite you back to this space.

Initial Reflection—10 minutes
Once the group returns to the community space, invite them to sit in a circle and share the following:

- How did you identify who to sit in reciprocity with?
- In what ways did you ask permission?
- What did you learn from the leafy being you interacted with?
- How do you feel after participating in this process?

Journal Reflection—10 minutes

Express gratitude for the group's insight and *say*: I would now like to invite you to continue this reflection process by participating in a free writing exercise. I will read another quote from Dr. Kimmerer and provide a prompt for which you will write your thoughts.

> *Action on behalf of life transforms. Because the relationship between self and the world is reciprocal, it is not a question of first getting enlightened or saved and then acting. As we work to heal the earth, the earth heals us* (Kimmerer 2020).

Facilitator: After hearing this quote and sharing in reciprocity with your new friend, reflect on what actions you can take in your everyday life to contribute to this healing process. Please be silent as we look inward.

Reflection Questions—10 minutes

Invite each participant to share their one main takeaway from the journaling process. After each participant has shared, ask:

- How do you plan to implement this deepened understanding in future reciprocity?
- In what ways can you pursue reciprocity with those in this community?
- Why as a society do we focus on taking rather than giving?
- What can we do moving forward to inspire this act of healing through reciprocity in others?

ACTIVITY E: MY NATURAL IMPRESSION

Learning outcomes:
Upon completion of this activity, participants will be able to:

- Express personal identity in creative ways
- Develop enhanced engagement with their more-than-human kin
- Demonstrate greater vulnerability as they express themselves
- Deepen connections with other students

Preparation time: 10–15 minutes
Materials needed: This is an arts-based activity that requires several materials to be gathered and prepared ahead of time.

- Card stock or canvas paper
- Soft rubber brayer (3 pack)
- Flat paint brushes
- Acrylic paint set (16 pc assorted colors)
- Ink stamp pad set (20 pc assorted colors)
- Paint tray pallets (10 pc)
- Vinyl tablecloth (to prevent paint transfer to the ground)

Activity time: Item collection—10 minutes, Activity—50 minutes

INSTRUCTIONAL SEQUENCE DESCRIPTION

This activity integrates arts-based expression and engagement with the more-than-human world. Participants will explore their surroundings and select leaves, feathers, or natural items that they find that speak to them. Once collected the participants will use ink or paint to transfer the image of their selected items.

After a brief introduction to one another, the participants will begiven 10 minutes to explore the surrounding area for items that speak to them.

FIGURE 2. An example of completed nature printing projects by undergraduate college students as a part of a nature-based wellness series facilitated by Sassaman. STEVE SASSAMAN

Facilitator: I would like to invite you to take 10 minutes to explore our surroundings. You will identify up to five items that speak to you. These can be leaves, feathers, or any other item that has fallen from our more-than-human kin. Please stay in the immediate area so that you can hear my signal of when to return to the group. (Emphasize that any selected item should be on the ground and not plucked from a living being.)

Printing Process—30 minutes

Once the group returns to the creative space, invite participants to the demo table and provide an overview of the various materials they will be using. Describe that they will be making prints either using the supplied stamp pads or acrylic paint to design an image that represents them. Demonstrate each technique and ask if there are any questions.

Sharing—10 minutes

Invite each participant to share their creation and describe how the new image represents them and their connection to the more-than-human. Be sure to provide guidance so that each participant has equal sharing time.

Reflection Questions—10 minutes

After each participant has shared, ask the following:

- What did you notice about the similarities you shared with fellow participants? What surprised you about commonalities?
- Did anyone highlight a different perspective than yours? How might these differences enhance your understanding of the world around you?
- How did you go about selecting your printing materials? In what ways do we interact with the natural world with which we are innately connected?
- As we transformed the items we incorporated into our creations, how might we continue to evolve ourselves? How can we continually absorb what's around us to enhance the canvas that is our being?

LEAVE NO TRACE VARIATION

This activity can be easily adapted to focus on the fourth principle of Leave No Trace: leave what you find. Instead of selecting natural materials, the participants will use a figure to represent them. Try to have a variety to create diverse footprints (e.g., dinosaurs, transformers). Invite the participants to visit different parks represented by ink pads or a cup of paint. As they travel across the different parks ask them what they are noticing.

Facilitator: As we travel to different parks or areas it is very easy to pick up seeds or other materials that can spread to other parks. It is important to always clean our gear between visits as we noticed how quickly we were able to spread potential invasive species across other parks.

The instructor is encouraged to share personal example. Sassaman often describes how the spread of the emerald ash borer in Nockamixon State Park in Pennsylvania caused the park to cut down 6,600 ash trees in 2017 to prevent further spread—a management decision that drastically altered the park.

ACTIVITY F: SHARED SENSORY POEM

Learning outcomes:
Upon completion of this activity, participants will be able to:

- Develop enhanced engagement with their more-than-human kin
- Demonstrate greater vulnerability as they express themselves
- Identify how individual perspectives may differ
- Describe how each unique perspective can be combined to craft a complete story

Preparation time: 10 minutes
Materials needed:

- Six notecards or pieces of scrap paper for each participant
- Writing utensils

Activity time: 20—50 minutes

INSTRUCTIONAL SEQUENCE DESCRIPTION

This activity provides an opportunity for guided mindfulness and encourages participants to have a meaningful moment with each of their senses. As participants share their observations, they can emphasize their unique perspective as they relate to nature's connectedness.

Sensory Observations—10 minutes
This prompt portion can be facilitated in a variety of ways depending on how much time is allotted. As a facilitator, you can explicitly guide participants to focus on each sense (sight, sound, smell, taste, touch) or you may provide participants with a notecard for each sense on which they can note their observations during the

FIGURE 3. Students are performing their shared poem during a graduate-level field course in Alaska, which was co-instructed by Sassaman and Ramsey. The students chose to add movement in addition to reciting the words. STEVE SASSAMAN

duration of an activity such as a hike or paddling trip. As an example, during the graduate course co-taught by Ramsey and Sassaman, the students were given notecards with the prompt to use them to focus on each sense during the five-hour ferry ride from Juneau to Haines, Alaska.

Group Poem Creation—10 minutes (Can be extended if time allows and is needed)
After each participant has shared, ask the following:

- What similarities did you notice about what you shared with fellow participants? What surprised you about commonalities?
- Did anyone highlight a different perspective than yours? How might these differences enhance your understanding of the world around you?
- How did you go about selecting your printing materials? In what ways do we interact with the natural world with which we are innately connected?

Facilitator: As we realized the poem, we all made unique observations. Some of us may have been guided by our biophilic value preferences. As we identified similarities, these perspectives were invaluable as we created a whole story together.

ACTIVITY G: FINAL VALUES ASSESSMENT

Learning outcomes:
Upon completion of this activity, participants will be able to:

- Deepen their understanding of their personal biophilic profile
- Examine how their biophilic values may have changed as they engaged in a range of nature-based activities
- Examine how understanding others' biophilic values may influence park protection strategies

Critique the biophilic profile approach to building rapport with fellow recreationists
Preparation time: 10 minutes
Materials needed:

- QR Code or link to biophilicprofile.com
- Journal (*outdoor guide*)
- Writing utensils

Activity time: 50 minutes

INSTRUCTIONAL SEQUENCE DESCRIPTION

The framing of this activity centers on the final week of the Brevard College Outdoor Experiences course. The completed outdoor guides are submitted with a final prompt related to biophilic values as one of the last entries:

Final Prompt: Revisit your answer to entry number 5 from Week One. Retake your biophilic values assessment.

- Have your scores changed?
- Why or why not?
- If they have changed, what experiences do you think influenced those shifts?
- Do your current scores feel accurate to you, and how you engage with the outdoors and nature?
- What feels accurate or inaccurate?

This approach and these prompts can be spread across an 8-week course, or it could even be condensed within a single experience. The objective is to let students practice meaning-making and critical assessment of experiences in the outdoors from a range of perspectives.

This activity provides an opportunity for guided mindfulness and encourages participants to have a meaningful moment with each of their senses. As participants share their observations, they can emphasize their unique perspective as they relate to nature's connectedness.

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