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Scents of Place: exploring self, place and planet through botanical fragrance

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Scents of place: Exploring self, place and planet through botanical fragrance



Introduction & overview

This learning module provides instructors with an experiential field guide for introducing students to the Inner Development Goals (IDG) through self-guided mindful smelling activities and reflection prompts related to botanical fragrance. The Inner Development Goals are a framework to accelerate the work toward achieving United Nations' Sustainable Development Goals (SDGs) through the power of inner development. The interdisciplinary nature of this module allows for use or adaptation in a wide range of courses looking for outdoor, place-based and self-guided experiential learning to explore the role of botanical fragrance for people, plants and pollinators. The overarching goal of this module is to deepen students' connections to their senses (and scents) of self, place and planet through exploring botanical fragrance with mindful smelling.

The learning activities in this module are designed to be used together or separately, as a stand-alone activity (from 15 to 75 minutes) without any additional preparation, or in conjunction with other course materials and learning objectives. The experiential and exploratory design is intended to raise questions (rather than answer them definitively) and foster discussion about the role of smell for humans and other organisms as an environmental sense.

This interdisciplinary learning module broaches topics related to:

- the role of smell and smell loss in human health, well-being, culture and economies
- mindfulness practices, biophilia and self-care as critical dimensions of individual wellbeing and just societies
- the sustainable business of ecological landscape management, including the social, environmental and economic role and impacts of the horticultural economy
- actionable solutions for individuals and communities to address the global biodiversity crisis in their own 'backyards' through planting native plants
- bioregional knowledge and perspectives which begin with sensory attunement to earth processes and forces operating at interconnected local and global scales

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- geoaesthetics or geohumanities, fields of inquiry at the intersection of art, environment, and the humanities which use experiential, creative and artistic methods (art, performance, fieldwork, storytelling) to address questions of sustainability in the Anthropocene

Student learning objectives

Upon completion of this learning activity, students will be able to:

1. Exercise their sense of smell to experience mindfulness, support their wellbeing and deepen feelings of connectedness to place
2. Explore the links between inner (IDG) and outer (SDG) sustainable development goals through mindful smelling with fragrant plants
3. Appreciate the role of scent in supporting biodiversity and human cultures and economies

The Inner Development Goals (IDG) are designed to support our interior well-being in ways that support a sustainable future. Drawing on science-based understandings of inner development, the IDGs offer tools for transforming our inner and outer worlds for mutual thriving.

Mindfully smelling fragrant plants is one way to make sensible the connections between our inner (smell sensations, feelings, memories) and outer worlds (the role of scent in pollination and biodiversity). As such, this learning activity aligns with the five dimensions of inner development, which seek to develop the transformational (inner) skills needed to accelerate (outer) Sustainable Development Goals (UN SDGs).

United Nations Sustainable Development Goals (SDGs)

This learning module aligns directly with:

- **SDG 15 Life on Land** which seeks to “protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss”.
- **SDG 16 Peace, Justice & Strong Institutions** which seeks to “promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.”

Inner Development Goals (IDGs)

This learning module aligns directly with the [five dimensions](#) of Inner Development:

1. **Being** — Relationship to Self: Cultivating our inner life and developing and deepening our relationship to our thoughts, feelings and body help us be present, intentional and non-reactive when we face complexity.
2. **Thinking** — Cognitive Skills: Developing our cognitive skills by taking different perspectives, evaluating information and making sense of the world as an interconnected whole, is essential for wise decision-making.
3. **Relating** — Caring for Others and the World: Appreciating, caring for and feeling connected to others, such as neighbors, future generations or the biosphere, helps us create more just and sustainable systems and societies for everyone.

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4. **Collaborating** — Social Skills: To make progress on shared concerns, we need to develop our abilities to include, hold space and communicate with stakeholders with different values, skills and competencies.
5. **Acting** — Enabling change: Qualities such as courage and optimism help us acquire true agency, break old patterns, generate original ideas and act with persistence in uncertain times.

Using this learning module

Consider assigning the poison ivy quiz for credit (or extra credit), before students begin these learning activities.

For a 15 - 30 minute in-class activity - ask students to go outdoors on campus and complete the mindful smelling exercise (Part 1) and record their observations (Part 2).

For a 30 - 75 minute in-class activity - ask students to take a self-guided walk on campus and locate five different aromatic plants for completing the mindful smelling exercise (Part 1) and, along the way, look for different aromatic plants. Stop to complete each mindful smelling activity with a different plant. Complete Part 2 in the field. Use Part 3 as the basis for discussion or group-work upon returning to the classroom (e.g. one question per group). If Part 3 is used as homework, consider asking students to choose one of the five questions (#11-15) and potentially pair it with a reading.

For a take-home activity - ask students to complete the Assignment (Part 1, 2) on their own, in an outdoor environment of their choosing with handwritten field notes (to be submitted in class) and upload their typed responses to Part 3 in a learning platform (e.g. Canvas).

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Exploring self, place and planet through botanical fragrance

Introduction: the nose knows

Scent is a form of chemical communication in the air used by plants to attract pollinators: bees, butterflies, beetles, birds, ants, wasps and more. People are also attracted to fragrant plants; consider the smell of a tomato vine, fresh basil or a rose. In humans smell (olfaction) has direct connections to emotion and memory in the brain. For this reason, our sense of smell establishes and activates relationships between people and place; it can also be a visceral register of environmental information and change. Yet, rarely do we stop and smell the plants on campus or in the park. What would happen if we did? What lessons might we learn from fragrant plants?

This assignment invites you to mindfully engage your sense of smell and explore your campus (or place) through botanical fragrance. Getting to know (nose) your place through scent is a form of learning and stewardship. Embrace curiosity and creativity on the scent trail. What do you notice? What do you sense? How do you feel? What curiosity questions arise?

Why smell fragrant plants?

- Practice being present, a mindful technique
- Form new smell memories and emotional connections to place
- Cultivate curiosity about yourself and your environment
- Exercise your nose and your imagination
- Learn about role of scent in pollination and biodiversity
- Deepen feelings of connectedness to place, culture, and community
- Experience biophilia, the innate human connection to nature which supports well-being
- Feel hopeful; take action and plant a fragrant native plant today

Preparation

To complete this exercise, you will need to explore an outdoor environment with accessible plants, where you feel comfortable and safe: your campus, a park or a garden (of any kind). You will need to locate one or more fragrant plants, those with a scent (a smell, an aroma).

You may complete the five mindful smelling exercises using one fragrant plant. Or, you may complete the exercises by moving around in a garden setting or on a walk to locate five different aromatic plants to complete each of the five mindful smelling exercises.

If you are new to plant identification, download a free and credible app, such as [Pl@ntNet](#) or [Seek](#) (by iNaturalist). In addition to the app, you may also want to use an online plant identification guide for your region or ask a librarian for assistance locating a plant identification book at your local library. Positively identify each plant before you smell and touch it.

- Novice: Visit a vegetable or herb garden with one or more culinary herbs (i.e. mint, basil, thyme, rosemary, oregano, tomatoes, chives, fennel, dill, holy basil, cilantro, etc.).
- Advanced: Locate and identify five different aromatic plants on your campus or in a park to complete each of the five mindful smelling exercises.

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- Expert: Locate and identify five different *native* aromatic plants on your campus or in a park to complete each of the five mindful smelling exercises.
 - A plant is considered native or indigenous if it has occurred and evolved naturally in a particular region, ecosystem, or habitat without human introduction (e.g. [view this list of fragrant native plants](#)).

All smell abilities are encouraged to complete these activities. Whether you can perceive a scent or not, we invite you to engage your breath, memory, imagination and other senses during these exercises. There is no wrong way to smell or describe your smell experience! Using the instructions below, move about this environment in a way that is safe, comfortable and enjoyable for you. Learn more about smell loss and smell training therapies at [AbScent](#), [Fifth Sense](#) and [Monell](#).

If someone gets curious about what you're doing, consider inviting them to join you in a mindful smelling exercise. Read the prompt aloud; then smell quietly together for one minute.

Safety and stewardship

Respect the environment that nourishes people and pollinators through mindful smelling.

- Avoid poison [oak and ivy](#)! Complete the [poison ivy quiz](#). Stay on marked paths, positively ID a plant before touching (use an App!) and wash your hands after touching plants.
- Take care not to harm bees, wasps and other wildlife who depend upon native plants.
- Avoid picking flowers or leaves of plants unless you have permission, there is an abundance, and the plant will not be damaged by doing so.
- Don't eat the plants you smell; this is a smelling (not tasting) exercise.

Safety and stewardship certification

I, (write your name) _____, certify that I have completed the poison ivy quiz and feel comfortable positively identifying and avoiding poison ivy. If in doubt, I will avoid plants that I cannot positively identify. I will take care to stay on marked paths, positively ID a plant before touching it, avoid harming wildlife or plants, and wash my hands thoroughly with soap and water upon completion of my fieldwork.

Sign your name here: _____ Date: _____

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Part 1 - Fieldwork: Five mindful smelling exercises

Smelling plants requires focused attention on sensory experience in the present moment. Exploring a place through smell is a form of mindfulness (being present).

A typical mindfulness exercise activity consists of focusing your full attention on your breath (in and out), in an attempt to simply observe your sensations, feelings and thoughts in the moment with friendly curiosity (without criticism or judgment).

Stop and smell the roses

Locate and identify a fragrant plant in your environment. You may complete the five mindful smelling exercises below using one fragrant plant. Read the prompt then start a one minute timer. Afterwards, jot down notes about your experience.

Or, you may complete the exercises by moving around in a garden setting or on a walk to locate five different aromatic plants (or five *native* aromatic plants) to complete each of the five mindful smelling exercises.

Reminder smell safety: Positively ID your plant before smelling and touching!

1. Smell slowly - put your nose close to a plant and take a deep inhalation through the nose and exhale through the mouth. Focus on this sensory experience. Close your eyes. Can you detect the scent of the plant? Other scents? No matter, keep taking deep breaths through your nose for one minute; fill your lungs and expand your belly and exhale through your mouth. Be fully present in focusing your attention on the smell experience. Notice the experience with curiosity.

Afterwards, make notes of anything you experience: sensations, feelings, thoughts or questions that arise (doesn't matter what it is).

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2. Smell quickly - put your nose close to a plant and now take several quick sniffs in a row. Focus on this sensory experience. Close your eyes. What do you notice? Pay attention to what you are smelling and the experience of smelling. Visualize the smell. If you can't detect a scent, no matter, for one-minute alternate between a few quick sniffs, followed by a few normal breaths. Notice the experience with curiosity.

Afterwards, make notes of anything you experience: sensations, feelings, thoughts or questions that arise.

3. Smell with your hands - gently rub a plant leaf with your fingers to release the aromatic oils and inhale through your nose (using quick or deep sniffs). For one-minute, touch and sniff this plant and your hands. Notice what the plant feels like on your fingers. Does the scent change over time? Try cupping a leaf in your hands, exhaling warm, moist air into your hands and then sniffing (warm, moist air also helps release scent). Now, try inhaling the scent of a plant into your mouth rather than your nose (~80% of the flavor of food occurs through retronasal olfaction). Notice the experience with curiosity.

Afterwards, make notes of anything you experience: sensations, feelings, thoughts or questions that arise.

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4. Smell while moving - scents waft in the air much like the unfurling tendrils of a fern. Move around this plant or environment and sniff the airspace in different places for one-minute. Just move your body about, sniff, and notice the experience. Or, you might move your hand around like a fan to waft air towards your nose. Or even try getting down low, on your hands and knees; sniff the airspace close to the ground. Notice the experience with curiosity.

Afterwards, make notes of anything you experience: sensations, feelings, thoughts or questions that arise.

5. Smell with your imagination - imagine this aromatic plant is endangered. For one-minute, smell this plant while imagining that it is your job to keep the smell memory from being lost to the world, and teach it to others. How would you describe the smell experience to someone else, so they could imagine and appreciate the scent of this plant? What does the scent remind you of? How does it make you feel?

Afterwards, make notes of anything you experience: sensations, feelings, thoughts or questions that arise.

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Part 2 - Fieldwork: Record your observations

6. Make a quick sketch of a fragrant plant from your (a human's) perspective:	7. Make a quick sketch of a fragrant plant from a bee's eye perspective:
8. Make a quick sketch from the plant's perspective:	

9. What are the *names* of your fragrant plant(s)?

	Common plant name:	Latin (scientific) plant name:	Indigenous plant name:
1			
2			
3			
4			
5			

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Below is a field guide with descriptive language for talking about the smell experience of plants with 10 categories adapted from Ken Druse's book *The Scentual Garden* (2019). In reality, a single plant fragrance might fall into more than one category (e.g. lavender might be described using herbal, medicinal and floral categories), but the act of categorizing your smell experience enhances your ability to identify, describe and talk about smell experiences.

Botanical Fragrance Field Guide	
Category*	Descriptive words and examples
FOREST	woody, pine, moss, rosemary, patchouli, soil, mushrooms, cedar, forest floor
MEDICINAL	antiseptic, menthol, mints, eastern teaberry, eucalyptus, artemisia, chrysanthemum, acrid, metallic
SPICE	sharp, clove, spicebush, allspice, echinacea, ginger, cinnamon, citronella-scented geranium
FLORAL LIGHT	honey, sweet, honeysuckle, butter, witch hazel, eastern bluestar
FLORAL HEAVY	rich, cloying, forceful scents, lilies, winter jasmine, orange blossom, boneset, oakleaf hydrangea
FRUITY	lemon, citrus, iris, grape, berry, banana, strawberry, tropical, apple, northern blue flag iris
ROSE	black tea, baby powder, old rose, spice, plum, rose geranium, joe pye weed, red osier dogwood flowers
ANIMALIC	yeasty, sweaty, musky, fishy, ginkgo biloba fruit, bradford pear blossoms, urine (ammonia), fern leaf yarrow
INDOLIC	overripe fruit, lilac, manure, fecal, bathroom smells, hot garbage, paperwhite narcissus, skunk cabbage, rotten egg
HERBAL	lavender, anise hyssop, oregano, thyme, green tea, freshly-cut grass, mown hay, basil

10. Which categories/descriptive words apply to the fragrant plant(s) you smelled in Part 1?

Fragrant plant(s) you smelled	1st category or descriptive word	2nd category or descriptive word	3rd category or descriptive word
1			
2			
3			
4			
5			

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Part 3 - Reflection & research

Mindfully smelling fragrant plants is one way to make sensible the connections between our inner (smell sensations, feelings, memories) and outer worlds (the role of scent in pollination and biodiversity). As such, this learning activity aligns with the Inner Development Goals (IDG) framework, which seeks to develop the transformational (inner) skills needed to accelerate (outer) Sustainable Development Goals (United Nations SDGs).

The five dimensions and goals of Inner Development are outlined below (Figure 2) or check out the [5 minute IDG video and full framework](#), along with reflection questions. To answer them, you may want to incorporate your own mindful smelling experience with additional online research or incorporate one of the references or resources below.

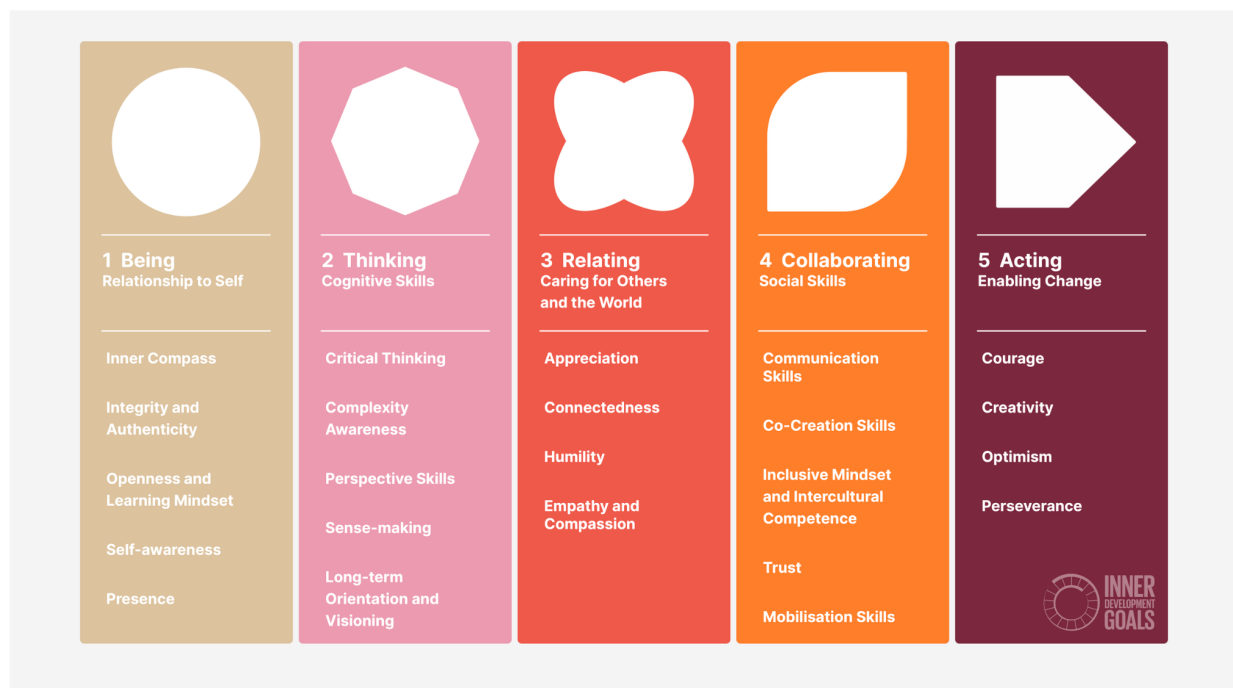


Figure 2. UN IDG Goals. Image from: <https://www.innerdevelopmentgoals.org/framework>

IDG 1. Being — Relationship to Self: Cultivating our inner life and developing and deepening our relationship to our thoughts, feelings and body help us be present, intentional and non-reactive when we face complexity.

11. Reflect on your mindful smelling experience with fragrant plants. View your notes and observations (sensations, feelings, thoughts, questions). **What did you learn about yourself from this experience?**

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IDG 2. Thinking — Cognitive Skills: Developing our cognitive skills by taking different perspectives, evaluating information and making sense of the world as an interconnected whole, is essential for wise decision-making.

12. In her book *Lessons from Plants* (2022), biologist Dr. Beronda Montgomery explores the ways that the science of plants can teach us humans lessons on being and thriving. The knowledge of plants, she writes, “shows us that you thrive or languish based on your ability to know who you are, where you are, and what you are supposed to be doing. Then you must find a way to carry on from this ‘sense of self’ to your surroundings and to pursuing your purpose.” (pg. 14).

Reflect on your sketch one fragrant plant from three perspectives: a person, a plant and a pollinator. Scent brings these three organisms together for different purposes. Discuss the purposes of the plant, the pollinator and the person in this fragrant encounter. How do you identify the purpose of the person in this scenario?

IDG 3. Relating — Caring for Others and the World: Appreciating, caring for and feeling connected to others, such as neighbors, future generations or the biosphere, helps us create more just and sustainable systems and societies for everyone.

13. Two artists, Jenny Odell (*How to Do Nothing*, 2019) and Tricia Hersey (*Rest is Resistance*, 2022), write about the critical importance of therapeutic moments - *mindfulness* and *rest* - as resistance to the relentless pace of productivity in a capitalist economy. They advocate in different ways, for reclaiming your attention and nurturing your physical well-being as necessary for social and environmental justice.

Reflect on your mindful smelling experience with fragrant plants. **What did you learn about your environment from this experience?** Consider how mindfully smelling fragrant plants - a restful moment of being present - can be an act of self-care *and* a way of deepening your connections to place (your bioregion) in ways that foster ecological awareness.

IDG 4. Collaborating — Social Skills: To make progress on shared concerns, we need to develop our abilities to include, hold space and communicate with stakeholders with different values, skills and competencies.

14. In *Braiding Sweetgrass* (2013), Dr. Robin Wall Kimmerer incorporates her experience as an indigenous woman and a botanist to demonstrate that reciprocal relationships with other living organisms are critical to mutual thriving and survival. She begins this book by asking readers to imagine smelling a fragrant native plant. She draws on three names for this plant, each of which provides additional perspectives and insights into its meaning, value and affordances for people.

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“Hold out your hands and let me lay upon them a sheaf of freshly picked sweetgrass, loose and flowing, like newly washed hair...Hold the bundle up to your nose. Find the fragrance of honeyed vanilla over the scent of river water and black earth and you understand its scientific name: *Hierochloe odorata* (scientific name), meaning the fragrant, holy grass. In our language it is called wiingaashk, the sweet-smelling hair of Mother Earth. Breath it in and you start to remember things you didn't know you'd forgotten. (Kimerer 2013, p.x)”

Botanical fragrance is integral to our cultural and ecological heritage. Native plants have coevolved within a place-based ecosystem for centuries; they live in balance with native insects and animals. Native plants create maximum biodiversity. **Ask someone else what *fragrant native plant* is meaningful to them, to others, or to this place. Discuss how this particular fragrant native plant supports people and pollinators? Or instead, consider how the three names (common, scientific, indigenous) for this plant offer insights into different ways people view and value it?**

IDG 5. Acting — Enabling change: Qualities such as courage and optimism help us acquire true agency, break old patterns, generate original ideas and act with persistence in uncertain times.

15. In his book *Nature's Best Hope* (2020), entomologist Dr. Doug Tallamy, argues that humans are the solution to the global biodiversity crisis. Wildlife populations are in decline because the native plants they depend on are disappearing. The solution is simple: plant native plants in our yards, campuses, parks and underutilized patches of land. And of course, fragrant native plants are sensory invitations for pollinators and people (to 'stop and smell the roses' – or anise hyssop)!

Check out Dr. Tallamy's [Homegrown National Park](#) movement to see if anyone in your area is on the map, or look up native plant organizations in your area, or check out [re:wild your campus](#) to find out if your campus is involved, or find a local native plant nursery in your community.

Do these local activism efforts to solve the global biodiversity crisis (SDG 15 Life on Land) give you a sense of hope and optimism? If so, why? If not, *what does?*

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Additional Resources

Eierman, Kim. 2020. *The Victory Pollinator Garden: Win the War on Pollinator Decline with Ecological Gardening*. Beverly, MA: Quarry Books Inc.

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