

Forest Bathing (Shinrin-yoku): How to Listen Like Trees

30

SENIOR
PSYCHOLOGY



LESSON SUMMARY

Students will learn about the theoretical and practical application of forest bathing (or Shinrin-yoku) as a mindfulness and therapeutic practice.



Activity Information

Grade Level: Senior

Estimated Duration: Two 75-minute periods
(First day indoor for theory and classwork, second day outdoor for application and reflection)

Materials: Chalkboard/whiteboard
Chalk/whiteboard markers
Laptops/Chromebooks (optional)
Scrap paper
Sticky notes
Pencils/pens
Something hard to write on (binder, textbook)

Setting: Indoor (classroom) and outdoor (access to a spacious wooded area)

Key Vocabulary: Forest bathing (Shinrin-yoku), forest therapy, mindfulness, mental health, sensory perception, attention restoration theory, stress reduction theory, phytoncides

Learning Goals:

1. Follow and meaningfully participate in guided forest bathing sequences.
2. Demonstrate how to use senses to be aware of and connect with the natural environment.
3. Identify and understand the services natural environments provide to support mental health and well-being.

Ontario Curriculum Links: **Social Sciences and Humanities, HSP3U University Prep, Introduction to Anthropology, Psychology, and Sociology**

C1.3 Explain the contribution to understanding human behavior of various psychological approaches (e.g., clinical, experimental, personality, abnormal, and developmental psychology).

C1.4 Compare the major research methods used for conducting psychological research (e.g., experiments, surveys, observations), and assess critiques of the various methods.

C2.1 From a psychological perspective, explain how various influences (e.g., environment, personality, developmental stage) contribute to an individual's psychological development.

C2.3 Explain how diverse psychological factors (e.g., perception, attitudes, mental health, temperament) influence individual behavior.

**Sustainable
Development Goals:**

1. Good Health and Well-being: Ensure healthy lives and promote well-being for students of all ages.
2. Quality Education: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all students.

Background Information

Forest bathing (Shinrin-yoku) is a Japanese stress management exercise where people engage their senses to deeply immerse themselves in the atmosphere of the forest (Furuyashiki et al., 2019, p. 2). This wellness practice often involves guided forest walks, but can also be performed through outdoor yoga, meditation, and deep breathing (Kotera et al., 2022, p. 337). This practice is a tool often used within **forest therapy** - the nature-based approach to psychological, sociological, and physical intervention led by trained health practitioners.

Studies have associated forest therapy and access to green space with the management of **mental health** concerns like anxiety, mood disorders, fatigue, stress, depressive tendencies (Oh et al., 2017, p. 1), and rumination-compulsive, repetitive negative thoughts (Kotera et al., 2022, p. 338). Forest therapy is said to positively impact physical health by improving pain management, cognition, and immune system function (Oh et al., 2017, p. 1).

Studies show forest bathing provides physical and psychological relief to people of both strong and compromised health (Furuyashiki et al., 2019, p. 2). The rewarding nature of forest bathing, and its value within psychology, is best understood by outlining the coalescent psychological concepts it embodies. Forest bathing intermixes the core principles and benefits of:

Mindfulness - The intentional direction of attention towards the present moment (Dunning et al., 2019, p. 244).

Sensory perception - The capacity to detect, experience, and interpret the physical world through sensation.

Stress reduction theory - The idea that spending time in unthreatening natural environments reduces stress and improves central physiological functions like blood pressure and heart rate (Kotera et al., 2022, p. 338).

Attention restoration theory - The idea that spending meaningful time in natural environments restores human concentration and awareness through the practice of “effortless attention” (Kotera et al., 2022, p. 338).

Forest bathing is a composite health remedy that pulls together various natural factors that work to enhance human wellbeing and prevent disease (Oh et al., 2017, p. 1). The health benefit of forest bathing is upheld by various components structuring forest ecosystems like higher, cleaner oxygen levels; sunlight; clean water; rich soils; natural, rather than artificial, smells and sounds; and natural aromatic wood oils like phytoncides (Oh et al., 2017, p. 9).



Phytoncides are volatile, antimicrobial, antifungal compounds emitted by trees and plants (Li et al., 2009, p. 951). Forest bathing allows for continued exposure to phytoncides, which has been associated with significant and long-lasting increases in human natural killer (NK) cell activity, NK cell counts, and anti-cancer proteins (Li et al., 2009, p. 956). Despite the intimidating name, human natural killer (NK) cells protect humans from infections and diseases by killing young, infected cells and cancerous cells before they can spread (Li et al., 2009, p. 956). Forest bathers regularly breathe in the forest air containing phytoncides that boost the level of NK cells in their blood, strengthening their immune functions (Li et al., 2009, p. 952).

Did you know?

Some trees that produce particularly high levels of phytoncides include evergreen trees such as cedars, spruces, and pines, as well as oak trees.

Advance Preparation

DAY 1 (Indoors):

Activity 1- Classroom Bathing

Begin by familiarizing yourself with the information provided in the Background Information section - be prepared to explain the background to students while creating the key terms mind map in Activity 2. Depending on preference, you may choose to present the information in oral and/or visual mediums.

Prepare for the introductory minds-on activity by reviewing the adjusted forest bathing prompts to guide students through a classroom bathing exercise. The purpose of this activity is to prime students to use their sensory perception to quiet their minds, the same way they would if they were forest bathing.

Activity 2- Expert Groups

In this activity, students will be split into eight expert groups. Each group will be asked to define one key term and connect it to the minds-on activity.

Prior to the lesson, pre-select home groups of eight students. These groups can be curated based on strengths, and learning preferences, or by simply sectioning off students who sit near one another.

If there are not enough students to complete a full home group of eight, number off the home groups that are complete, and once expert groups are made, pair each leftover student with one member of an expert group and have them work as a pair to teach their home group together.

Prepare eight sticky notes by writing one key term on each sticky. The key terms are: Forest bathing (Shinrin-yoku), forest therapy, mindfulness, mental health, sensory perception, attention restoration theory, stress reduction theory, and phytoncides.



Activity 3- Extending Understanding

In this activity, students are asked to build on their prior knowledge of psychological research methods, biases, experimental laboratory-based studies, surveys, and observation to examine forest bathing as a theory and practice.

Students will work in pairs with the student sitting next to them or a chosen peer to discuss each prompt. After the discussion, invite students to share their ideas with the class. To prepare, write the prompts on the board or type them onto PowerPoint slides to give all students the chance to auditorily and/or visually process the questions being asked.

DAY 2 (Outdoors):

Activity 1: Guided Forest Bathing

In this activity, students will be taken to a local, accessible forested area (or park/schoolyard) and guided through a sequenced forest bathing exercise. If there are students who require mobility aids, they will need to be able to travel to and navigate through this area, so find an accessible forested area near your school.

Establish and note the trail, distance, timing, stopping points, and return route that will be taken after finishing the exercise. Make special note of any potential safety or health hazards that may be found along the trail you intend to use. Some common hazards include poisonous plants (i.e., poison ivy) and pests (i.e., ticks) depending on your locality and season. Familiarize yourself with the hazards that are specific to your trail and take the appropriate precautions to manage these risks, such as having participants wear long sleeves, pants, and socks; tuck their pants into their socks; wear close-toed shoes; apply tick-specific bug spray; and stay on the path.

Activity 2: Self-Reflection

Ensure that you bring enough paper for the students to write their self-reflections. Have each self-reflection prompt with you so you can read them out to students taking notes. Ensure students have writing tools and something hard to write on.

For accessibility purposes, some students may benefit from having a printed handout with the prompts and paragraph lines indicating where and how much they should write in response. Some students may require Chromebooks, text-to-speech or other digital tools to record their thoughts. Ensure that each student has the appropriate tools to meet their needs.



Activities

DAY 1 (Indoors)

Activity 1

Classroom Bathing

Begin this lesson with a minds-on activity about mindfulness in the classroom to prime students on the practice of forest bathing. Without introducing forest bathing as a concept or practice, lead the class in a short mindfulness activity mimicking forest bathing. The prompts are slightly adjusted to fit the context of the classroom rather than outdoor spaces.

Step 1: Ask students to close their laptops, put all their devices down, and clear their desks of distractions.

Step 2: Invite students to turn their attention to their breathing. Have the students close their eyes and take a deep breath in through their noses, and then out through their mouths. Have them notice the silent pause between their inhale and exhale. Repeat the breath cycle four times, each time listening to the silent pause between breaths.

Step 3: Ask them to keep their eyes closed and silently count all the sounds they hear.

Step 4: Ask them to open their eyes and look for each sound they hear. Ask them to notice the sounds they can't see.

Step 5: Ask them to notice what the classroom feels like from where they are sitting.

Step 6: Ask them to pick one thing that they can sense (feel, smell, see, hear) that is making them feel calm. Volunteers are invited to share the sense with the class, after which the class will pause to sense it too.

Step 7: After finishing the exercise, have the class collectively brainstorm what an activity like that can be used for. Do not mention or define the term forest bathing yet; keep the brainstorm open-ended. Some prompts could be: How did that make you feel? What did the focus on your senses do to your internal monologue? Have you done something like that before?



Activity 2

Expert Groups

In this activity, students will be split into eight expert groups and asked to define and make connections between the minds-on activity and key terms.

Step 1: Have the students sit in their pre-selected home groups of eight. Assign each student in each home group a number from one to eight.

Step 2: Once each student has a number, direct all students with the same numbers to sit with one another in their expert groups. Each student should bring their laptops/Chromebooks, paper, and writing materials as they will all have to record and present their findings to their original home groups.

Step 3: Each expert group will be given a sticky note with one key term related to forest bathing written on it. Each expert group will work together to research and record a definition for their term and develop a connection between the term and the minds-on activity.

Step 4: Have students return to their original home groups to share their findings and connections. Each home group member should record each expert's term, definition, and connections.

Step 5: Take up the home groups' findings by creating a mind map out of the groups' information on the board. Begin the map by writing forest bathing in the centre, accompanied by the definition. Invite all groups to add or tweak the definitions and connections until the class has teased out forest bathing as a psychological treatment and mindfulness practice using their inferences, observations, and research.

Step 6: Fill in the gaps of the mind map by explaining each key term, its context, and its relevance using information from the Background Information section. Note: the added contextual information on the mind map. Have students add new information to their notes as well.

Step 7: Once the mind map is finished, take a picture of the mind map and upload it to your course website so that it can be accessed by all students.

**Activity 3****Extending our Understanding**

In this activity, the students are asked to extend their understanding of forest bathing according to a series of prompts. First, you will ask students to think and discuss each prompt with their shoulder partner for a minute. Then, you will invite them to share their ideas with the class.

Step 1: Have students discuss the benefits and limitations of forest bathing as a practice. Why is this form of therapy or mindfulness practice easy to do compared to other forms of treatment? In what ways is this treatment challenging?

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Step 2: Tell students to think back to the minds-on activity and discuss what they found difficult and/or easy about it. How would the activity have felt if they had done it in the forest rather than in a classroom? Explain that they will be able to test forest bathing, understand its potential benefits, and reflect on their experiences in their next class.

DAY 2 (Outdoors):**Activity 1****Guided Forest Bathing**

Step 1: Once at the edge of the forest area, ensure that all phones and other (unnecessary) devices are put away and out of sight. Explain to the students that most of the forest bathing will be done in silence, and they will be instructed on when they should share their thoughts out loud.

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Step 2: Begin the sequence by guiding students slowly through the forest, reminding them to keep their senses open and to notice the environment around them. Walk for 10 minutes into the forest in silence.

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Step 3: Have the class stop where they are, inviting students to either sit or stand while they turn their attention to their breathing. Have students close their eyes and take a deep breath in through their noses, and then out through their mouths. Have them notice the silent pause between their inhale and exhale. Repeat the breath



cycle eight times, each time listening to the silent pause between breaths. Noticing the silent pause is meant to help them clear their minds and help them become aware of how they feel in the moment.

Step 4: Continue walking the path very slowly. Instruct the students to notice what living and nonliving things are in motion around them. Do this for five minutes.

Step 5: Have students spread themselves out. They can sit or stand, but they should try to remain still. Then explain that all the following questions are to be answered in their heads. Do the following for 10 minutes.

Ask them to:

- Close their eyes. What does the forest smell like? What does the air smell like?
- Listen to the sounds of the forest and count the different sounds they hear.
- Watch the forest's sights and count all the different things they can see from where they are. Can you see each thing you hear?
- Touch all that they can reach. What does the forest feel like from where they are standing or sitting? What does the air feel like on their face? Can they feel the light through the trees? Can they feel the shade?

Step 6: Have the students silently return to the group, standing or sitting in a circle. Invite each student to share one thing they can sense (feel, smell, see, hear) that is making them feel calm. After every answer, pause long enough to let the circle sense it. Discovering what each student senses exercises controlled focus and awareness. Do this for five minutes.

Step 7: After everyone has spoken, return to silence and repeat the breath cycle another eight times, each time listening to the silent pause between breaths.



Activity 2

Self-Reflection

Step 1: Have each student settle in their own area and hand out the paper to record their self-reflections. Explain that the students are to record their thoughts and hand them in as an exit card. Have the class jot down their answers as you read the questions. Leave 20 minutes to complete the reflections.

Step 2: Read the prompts out slowly:

- Describe how you are feeling in your body.
- Describe how you are feeling in your mind.
- When, if at all, did you feel the calmest in the forest? Why?
- What was the most confusing prompt or instruction? Why?
- What was your favorite sound, smell, sight, and feeling?

Step 3: Collect all reflections before walking back.

Extensions:

Continue mindfulness practice by building time in the weekly schedule for a short, guided forest bathing exercise.

Allow students to volunteer as the weekly guides, having them develop their own short sequence to lead the class each week.

Further Reading:

[Nature and Forest Therapy of Canada https://natureforesttherapycanada.org/](https://natureforesttherapycanada.org/)

[The ANFT Way of Forest Therapy https://anft.earth/information/the-anft-way-of-forest-therapy/](https://anft.earth/information/the-anft-way-of-forest-therapy/)

[The Standard Sequence in Guided Forest Bathing https://silvotherapy.co.uk/articles/standard-sequence-in-forest-bathing](https://silvotherapy.co.uk/articles/standard-sequence-in-forest-bathing)

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