

Sensory Awareness Trail

Trail length 0.2 mile
Black trail blazes



Are you ready?
Let's Begin!
Use your 5 senses to
discover the forest!



To start, make an "OK" sign with your fingers around the guide rope on the right side of the path.

Next, with your eyes closed, begin your walk and feel for the 1st of many carved picture signs.



When you find each carved picture sign along the rope, stop and try to guess what the picture is, hint: is it a plant or animal?

Then look and read the description found in this guide to learn about what you have found.

1 Pitch Pine The pitch pine has thick bark to protect its cambium layer from fire. **Feel** the bark of the two pitch pines on either side of the trail marker. **Look** for green pine needles on the ground, break pine needles and **smell** the oils. **Feel** the waxy layer on the needles. The waxes and oils of the pitch pine needles make them very flammable, or able to catch fire easily. *Can you smell the pine needles on the forest floor?*

2 Forest Layers The layer that lies directly above the forest floor is the herbaceous layer. This layer includes tree seedlings, ferns, grasses, and weeds. Many of the plants found in this layer bloom in early spring, before the trees begin to grow their leaves. The next layer is called the shrub layer which is made up of young trees, mature shrubs, and bushes. **Look and listen** for animals that might use the herbaceous layer for food and the shrub layer for shelter such as rabbits, squirrels, mice, and raccoons.

3 Bayberry Early settlers used the waxy, gray berries from the bayberry plant to scent soaps and to make candles. Bayberry is a semi-evergreen shrub with thin, wedge-shaped leaves. Although it is usually found along the coast, bayberry may be found growing in scattered patches throughout the Pine Barrens. To sample the bayberry plant's distinct fragrance, **crush** one of the leaves, berries or buds to **smell** the sweet aroma. The berries are a food source for birds, including chickadees, bluebirds, and catbirds.

4 Senses Talking Tree Let go of the rope and enter the sensory awareness learning station. **Press the button on the talking tree, and take a seat on a bench and listen.** As you sit quietly, you may **hear** some sounds of the forest such as, birds chirping, squirrels chattering, rustling of leaves, and creaking of branches. **Press the button on the talking tree again to hear additional information.**

5 Sandbox In the corner of the learning station, you will notice a sandbox. This is a place to simulate animal tracks. **Try to make a deer track in the sandbox by holding out your pointer and middle finger in a "peace" sign.** Kneel down and make a pattern similar to the one on the trail marker. While you continue on the trail, **look** closely for deer tracks and maybe you may even **see** a deer. Deer are considered "edge species" because their preferred habitat is near openings in the forest.

6 Chestnut Oak The sweet acorns of the chestnut oak and other oak species are an abundant and favorite food for deer, squirrel, raccoon, and several species of birds. The bark was once used for tanning leather. **Look** up at the canopy, or upper layer, of trees to see various oaks. The bark of chestnut oak has ridges and deep, coarse furrows. Gently **touch** the furrowed bark. The leaves of this oak have rounded edges or lobes. *Can you find a chestnut oak leaf on the ground?*

7 Blackjack Oak The blackjack oak is a pioneer tree that quickly sprouts in a burned area or eroded soil. Common in the Pine Barrens, it grows well in dry sandy soil. The highly flammable, leathery leaves will remain on the tree even after turning brown in winter. **Look** for the twisted scar on the trunk of this blackjack oak from lightning. Find a blackjack oak leaf on the ground, **feel** the small bristles at the end of the leaf tips. **Touch** the bark of this tree and compare to what you felt on the chestnut oak bark.

8 Teaberry Teaberry is a tiny evergreen shrub or subshrub with shiny dark leaves on short woody stems. In the spring, teaberry has small waxy, white bell-shaped flowers. It also produces a red edible fruit that ripens in the summer. Both leaves and fruit have a wintery green smell and flavor. If you **look** closely on the forest floor on both sides of the trail, you will find the tiny teaberry. **Break** a teaberry leaf in half to **smell** the mint-like fragrance.

9 Jersey Sandstone On the opposite side of the trail you can see a sample of Jersey Sandstone, or Ironstone. **Feel** the rough texture of this stone with your fingers. Settlers built their homes from the abundant timber, but the foundations were made from this iron-laden stone found in the gravelly Pine Barrens hills. You can **see** the small pit where sandstone was once mined. *Do you see any pieces of rusty sandstone around the trail?*

10 Rotting Log You may **see** a number of rotting logs and brush piles along the trail. During this stage of the lifecycle of a tree, it provides habitat for organisms and returns nutrients into the soil. *Does the rotting brush pile have a smell?* If you tiptoe along here during a warm day, you might **spot** a Northern fence lizard. This small reptile may be gray, tan or brown with darker bands across its back. Fence lizards feed on flies, sow bugs, and other small insects. *What other animals might use a rotting log?*

11 Moss & Lichens **Use fingers to lightly press on the moss,** notice that it is like a sponge that holds water. Moss is not a true plant; it does not have roots, stems, or leaves. Mosses, such as the hair-cap moss pictured here, and cushion moss, are found growing in clumps in acidic soil in the shade along this trail. Mosses help other plants including trees to grow by gathering soil and holding moisture. A lichen is two organisms, algae and fungus, living together. The algae provides food for both while the fungus provides protection from wind and sun and captures moisture. *(This relationship, where both benefit, is known as symbiosis.)* Lichens are pioneer organisms, they are the first organisms to grow on bare soil and tree bark. **Look** for and gently **touch** the crusty silver-gray lichen on the bark of a nearby tree.

12 Habitat Brush Pile Walking down a gradual slope, you approach a clearing along the forest edge. On a sunny day, even with your eyes closed, it should appear to be brighter here. **Feel** the fresh breeze on your face.

Does it feel cooler or warmer here? **Listen** to the rustling leaves and songbirds. The edge of a forest is an area that many forms of wildlife use as a habitat, including white-tailed deer, red foxes, rabbits, bobwhite quail, and mockingbirds. These species might prefer elements of the two habitats, such as open grass to graze upon in a field and the protection of trees in a forest. Brush piles provide safe habitat for many small birds, reptiles and mammals. The logs, branches and twigs allow them to hide, bed down out of wind and camouflage themselves from predators. On sunny days, fence lizards will often bask in the sun on these logs. Be quiet and **look** for these cold-blooded reptiles as they gather the warmth from the sun's rays.

13 White Oak As you enter back into the forest, **notice** the white oak tree. It has a whitish-silver bark. *Can you find one of its lobed leaves on the ground?* More than 180 types of birds and animals enjoy its sweet acorns. This slow growing tree is known for its durable wood. Because of its high quality, it is used to make many wood products. Barrels, buckets, and boats are fashioned from its wood because its vessels are filled with a substance that makes it resistant to water and air.

14 Bats Along the trail you will **see** a bat roosting box on a tree near an open clearing where bats tend to fly. This style of box with an open slatted bottom and narrow dark spaces mimics the loose bark of trees that bats might use for roosting during the day and raising their young which are born in June. Bats use a process known as echolocation, the use of sound waves and echoes to navigate and find food, including small insects, in the dark. The sound waves that return to the bats' ears allow them to tell where the object is, its size and its shape. Along the trail **look** for other styles of boxes used by birds, including a bluebird winter roost box, with a hole in the lower corner, and an Eastern screech owl or Northern flicker box, a large box with a large center hole.

15 Pollinator Patch The plants here provide a pesticide free breeding and feeding area for bees, butterflies and other pollinators, necessary for the balance of nature and human food production. Milkweed, especially, supports egg laying and is a good nectar source for the monarch butterflies' migration to and from the United States to Mexico each year. *Can you see any butterflies, moths, beetles or other pollinating insects here?*

16 Wildlife Habitats Learning Station **Explore** other signs of animals and the habitat resources they find in this forest as you follow along the trail. *Do you recognize the 8 animal signs shown at this station?* (Answer key on inside fold)

17 Sour Gum As you approach the sour gum trail marker, you enter a forest type called a hardwood swamp. Here you will **notice** wetland tree and shrub species such as red maple, sweet pepperbush, dangleberry, highbush blueberry, and sour gum, also known as black gum or tupelo. This tree grows in freshwater swamps and produces a bluish black fruit in October. Wood ducks, bluebirds, robins, mockingbirds, foxes, opossums, raccoons, and squirrels eat the fruit. *Can you find a sour gum leaf on the ground and notice its simple, oval shape? Is there fruit on the tree at this time of year?*

! For your safety, please stay on the trail to avoid contact with poison ivy and ticks. Please do not touch any plant or eat any fruit/berry unless an adult has properly identified it.



Answers to the Wildlife Habitats Learning Station 16

1. **Tracks**
Woodchuck, raccoon, opossum
2. **Treefrog**
Spring peeper, loud "peep" call
3. **Scat or droppings**
White-tailed deer, pellets in a pile
4. **Feather**
Rigid center quill, softer barbs
5. **Woodpecker**
Holes in trees, sound of drumming on trees
6. **Hummingbird nest**
1.5 inches diameter, made of moss, lichen, bound together with spider silk
7. **Skunk**
Strong smelling spray that can reach up to 12 to 15 feet
8. **Spider Web**
Orb weaving spiders produce webs that look like spokes of a wheel and concentric circles

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Forest Resource Education Center
495 Don Connor Blvd
Jackson, New Jersey 08527
(732) 928-2360
FREC@dep.nj.gov



A Self-Guided Trail to Test
Your Senses and Discover the Forest

Sensory Awareness Trail

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18 Water Cycle/ Watershed Talking Tree



Stop to look at the watershed kiosk. For millions of years, the same water has been used. Water is transpired through plants and evaporates from land and water bodies, which forms clouds in the atmosphere. The clouds release the water back to earth through precipitation. A large oak tree can transpire 40,000 gallons of water in one year. *What role do you play in the water cycle? Press the button on the watershed kiosk to hear the talking tree.* You will discover information about the Barnegat Bay watershed, in which you are now standing. Rainwater falling here may flow down river all the way to the bay. *Look on the other side of the kiosk and see if you can determine which watershed you live in. Press the button again to hear additional information about watersheds.*

19 Red Maple



Walk along the boardwalk, notice the red maple trees. In the late winter, the sap from maple trees begins to flow and they can be tapped for maple syrup production. Native Americans were the first to discover that the sap from a maple tree tastes sweet. They collected sap in buckets made from hollowed out birch logs. Then the Native Americans boiled the sap and used it to sweeten food or to drink. Maple syrup is still made today based on the Native Americans' methods. *Can you think of other foods that come from trees?*

20 Cinnamon Fern



Look at the ferns growing on either side of the boardwalk. The cinnamon fern starts in the spring as fuzzy "fiddleheads" and grows into dark green leaves called fronds. These can grow up to 3 feet tall, with separate distinctive cinnamon-brown spore bearing fronds. Unlike flowering plants that produce seeds, ferns produce spores. In fall, the fronds turn golden. In the winter, they become brown and withered. *If you look closely in the winter, can you see brown withered stalks?*

21 Sweet Pepperbush



Growing as a shrub up to 10 feet tall, in late summer, July through September, look for 5-petal flowers that bloom in spikes and smell spicy - sweet. The flowers are visited by honeybees and other nectar-feeding insects. This shrub is common in seasonally flooded wetlands. In winter, look for the capsules that develop from the flower clusters. *Do these capsules look like peppercorns?* Leaves are simple, oval, with serrated edges, and turn yellow in autumn. Another common name for this plant is soap bush, coming from the suds produced when flower petals are rubbed in hands with water.

22 American Holly



American holly is a broadleaf, shade-tolerant evergreen found in hardwood swamps throughout the Pinelands. Its bright red berries, found on female trees in late autumn through winter, are a favorite food for wildlife including cedar waxwings. Its branches are used as holiday decorations. *Notice, but don't touch, the spiny teeth on the edge of its leaves. Can you tell if this is a male or female tree?*

23 Beaver



Look for a scar at the base of the tree that was chewed by a beaver with its sharp incisor teeth. Beaver chew down trees so they can eat the tender bark off the top branches and the cambium layer beneath the bark of the trunk. Up stream, there is an active beaver lodge, and occasionally, twigs and branches with beaver chew marks float down river. Some tree species that beaver prefer include aspen, willow, and maple.

24 Toms River



Upstream are the headwaters (beginnings of rivers) of the Toms River. They trap floodwaters, recharge groundwater, remove pollution, provide fish and wildlife habitat, and sustain the health of downstream rivers. *Notice the clear, tea-colored water of this river. There is not as much tannic acid from leaves or iron accumulated in the water as you would find downstream, where the water is a dark brown color. Since the water here is clean, the NJ Division of Fish and Wildlife periodically stocks this river with trout. Through quiet observation, you may see or hear a variety of other aquatic creatures, such as leopard frogs, water snakes, pickereel, snapping turtles, waterstriders, and whirligig beetles.*

25 Forested Buffer



Notice the variety of plants that grow along the banks of the stream. A riparian forest is a forested or wooded area beside a body of water such as a river, stream, or pond. By keeping this area wooded, we are protecting the water by filtering runoff and erosion, providing wildlife habitat, and scenic beauty. Trees in the riparian buffer also improve trout habitat by limiting how much sunlight can reach the stream surface, keeping the water temperatures lower and more consistent. Trees also provide woody debris for the stream, an important component of trout habitat.

Congratulations!

You have completed the Sensory Awareness Trail. You may return along the white trail leading up the hill towards the Interpretive Center.