

Station 21

Look for two things growing on or beneath this tree. One is blue-green and scaly. It is a composite, symbiotic organism called *lichen*. The other is a simple yellow-green plant called *moss*. Of the two, which one has tiny leaves?

- a. Lichen
- b. Moss

Station 22

Notice the exposed rocks at the base of this large fallen tree. Trees growing on rocky hillsides often have shallow root systems.

Station 23

Farming on these rocky hillsides was very difficult. Try to imagine where crops might have been planted. Look at these two large rocks. What might have made the grooves you see on them?

- a. Natural wear
- b. Claw marks of a bear
- c. A farmer's plow
- d. Glaciers

Station 24

The large tree on your left is a *Chestnut oak*. Oaks are valuable to both humans and animals. The tannin contained in oaks was used in tanning hides. The acorns of Chestnut oaks are high in lipids, making them a primary source of digestible energy for wildlife. Which would be the better food source in *early* fall?

- a. Acorns from Red oaks that are high in energy but unpalatable
- b. Acorns from White oaks that provide less energy but taste better

Station 25

This tree is called *Shagbark hickory*. The large, loose pieces of bark provide places for bats to crawl under and roost during the day.

Station 26

Rest a moment by this large *sandstone* rock. It was formed from sediments falling to the bottom of the sea where the pressure of additional sediments gradually compressed the layers into rock. Now look at the tree above you. Trees with the growth pattern of this large oak are sometimes called *wolf trees*. Their limbs spread wide to create a large canopy over the forest floor. They often develop in open spaces where sunlight is abundant, whereas trees in a crowded forest grow straighter and taller to reach sunlight. Do you see any other wolf trees?

Station 27

As the path winds through this vegetation, what type of invasive plants do you see? (Remember what you saw at the beginning of the trail.)

- a. Japanese honeysuckle and Multiflora rose
- b. Grapevine and Greenbrier
- c. None of the above

ANSWERS

- | | | |
|----------------|-----------------|-----------------|
| 1. No question | 10. T,T,F | 19. B |
| 2. C | 11. F | 20. E |
| 3. B | 12. No question | 21. B |
| 4. No question | 13. C | 22. No Question |
| 5. No question | 14. A | 23. C |
| 6. C | 15. No question | 24. B |
| 7. C | 16. A | 25. No question |
| 8. B | 17. No question | 26. No question |
| 9. D | 18. D | 27. A |

TOTAL SCORE

Add up your correct answers to find your total score. (Don't forget your Bonus Points!)

- 1–5 Budding naturalist. Keep up the good work.
- 6–9 You really know your stuff.
- 10–14 You're nearly a professional.
- 15–18 Ask about becoming a Nature Center volunteer.



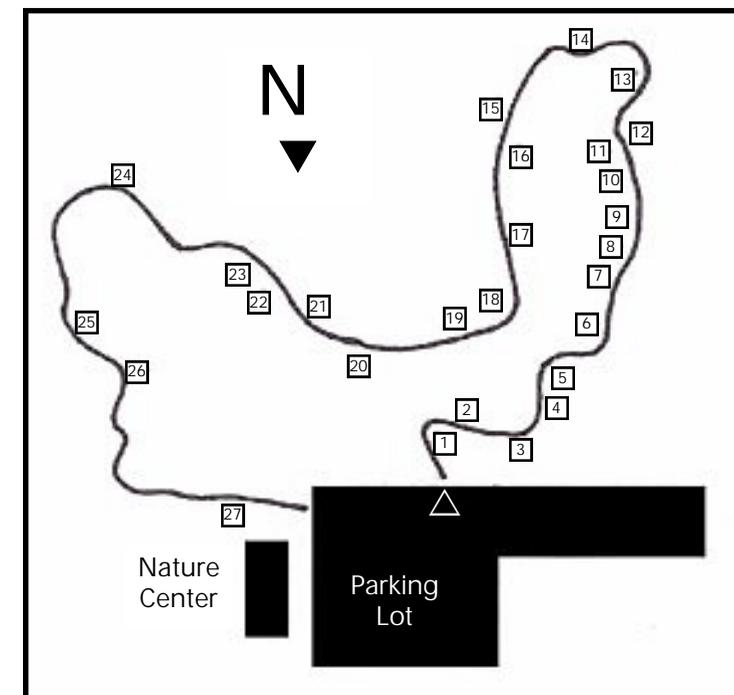
We hope you enjoyed the Discovery Trail. Look on your park map for locations and descriptions of additional hiking trails.

The *Brown County State Park Hiking Trail Guide* is available for purchase at the park office. This illustrated guide features detailed descriptions and maps of the park's hiking trails.

Brown County State Park

Discovery Trail

Begin this moderate, ½ mile trail at the south end of the Nature Center parking lot. The interpretive stops on this self-guiding trail were developed for your enjoyment. We hope you'll find the questions both informative and thought provoking.



Thank You

Master Naturalist Class of 2002
Boy Scout Troop #190
Friends of Brown County State Park
Brown County Lions Club

Station 1

At the beginning of the trail watch for two non-native *Invasives* that you will find along the trail. *Invasives* are plants which grow quickly and aggressively, displacing other plants as they spread. They can affect wildlife by competing with native plants that animals need for food and cover. Invasives may permanently alter the habitat for rare wildflowers and animals. They indirectly threaten two-thirds of all endangered species. Along the trail (and throughout the park), watch for these two invasive plants:

Japanese honeysuckle (at ground level) is a vine that grows up through trees and shrubs. It was imported as an ornamental.



Multiflora rose (to your right and left) is a shrub-like plant with thorns. It was often planted to form hedgerows.



Station 2

The small trees with large leaves in front of you are *Pawpaws*. They produce a fruit known locally as:

- a. Appalachian Apple
- b. Possum Fruit
- c. Indiana Banana
- d. Hoosier Sugarplum

Between Stations 2 and 3

As you walk along this section of the trail, you will see some young trees mixed in with the undergrowth. About 50 years ago this was a homestead, and the area was cleared and farmed.

Station 3

This large hole was:

- a. A sink hole
- b. The well on the old homestead
- c. A bear wallow
- d. From an uprooted tree

Station 4

This fragrant understory shrub is called *Spicebush*. It provides food for birds and butterfly larvae.

Station 5

Look on tree trunks for *shelf mushrooms*. Mushrooms and other fungi grow on dead and declining trees. Look all along the trail for growths of other kinds of fungi.

Station 6

What might have caused the small gully running from the top of the hill on the left?

- a. Deer using it as a path
- b. Erosion created by water runoff
- c. Wear from an old horse trail
- d. Buffalo migration

Station 7

Try to follow the growth of these two large *grapevines*. How many trees do they wind through?

- a. 1-2
- b. 3-5
- c. 6-8
- d. 9-10

Station 8

The plants in front of you are *Christmas ferns*. They usually grow in moist, moderately rich soil and are distinguished by small leaflets along the stems. Some people think these resemble:

- a. Christmas trees
- b. Christmas stockings
- c. Angels
- d. Snowflakes

Station 9

The roadbed you are walking along was made by settlers years ago. How can you tell it was man-made and not a natural formation?

- a. The nearly vertical sides and flat bottom would not occur naturally
- b. You can still see the shovel marks in the soil
- c. The path is wider than the normal animal trail
- d. Both **a** and **c** above

Station 10

The trees on the left side of the roadbed are larger than those on the right. Why? (Circle True or False)

- T F The right side of the road was clear cut, so those trees are younger
- T F The trees on the left receive more sunlight
- T F The trees on the right were trampled by a buffalo herd

Station 11

What kind of creatures might use this hole?

- a. Snakes
- b. Chipmunks
- c. Birds
- d. Insects
- e. Keebler elves
- f. Most of the above

Station 12

This is an *American beech*. In winter, young beech trees retain most of their leaves. As you drive through the winter countryside and spot trees with smooth gray bark and light brown or tan leaves, you'll be seeing beech trees.

Station 13

Notice the thorny shrubs. What are they?

- a. Ironwood
- b. Witch Hazel
- c. Devil's walking stick
- d. Wolfsbane

Station 14

Stop and rest for a moment in this quiet place. Can you smell the *pine trees* in the Pine Plantation behind you? It was planted in the 1930s by what organization?

- a. CCC (Civilian Conservation Corps)
- b. IDNR
- c. NBA
- d. AARP

Bonus Question:

Look and listen all around you. List any birds, insects, or animals that you see or hear. Add a point to your score for each species on your list.

Station 15

Notice the roots of the *Shagbark hickory* tree downhill from the trail. They began growing outward, but then reversed and grew back under the tree in search of nutrients and water.

Station 16

There is more undergrowth uphill from the trail than downhill. Why?

- a. The uphill side receives more sunlight
- b. Deer prefer browsing on the downhill side
- c. There is more wind on the downhill side

Station 17

Notice the young *Sassafras* and *Shagbark hickory* trees on the uphill side of the trail. Now look downhill. In winter, off in the distance, you can see the pine trees surrounding Strahl Lake.

Station 18

How did the large rocks get into the gully?

- a. Farmers removed them from their fields
- b. The CCC placed them there to stop erosion
- c. They were exposed by water rushing downhill
- d. All of the above are possible

Station 19

Look at this tree with a joined double trunk. If you look beyond, through the **V** of the trunks, you'll see a dead tree full of holes. What do you think caused these holes?

- a. Limbs that broke off
- b. Woodpeckers
- c. Squirrels
- d. Buckshot

Station 20

This *American beech* (like many of its species) has been defaced by "lovers". What are the consequences of carving into the bark of any tree?

- a. Cutting through the outer bark spoils the beauty of the tree
- b. The cuts damage the tree's "skin" and may provide access points for pests that can do further damage
- c. The love professed will probably die long before the tree does
- d. This constitutes defacing state property—the perpetrator should be getting out of prison soon
- e. All of the above
- f. None of the above