

# SCHOOL NATURE TRAILS

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Obed Watershed Community Association

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## Benefits of School Nature Trails

A nature trail is an important tool for teaching environmental awareness and appreciation, providing innumerable experiences for observing nature firsthand with all the senses.

- Trails are resources available to the entire school and apply to all curriculum areas.
- Trails provide a stimulating outdoor classroom for learning about the environment.
- Trails teach conservation by calling attention to both problems and solutions in managing natural resources through good conservation practices.
- Trails provide real examples of the interdependence between life and the environment. Nature can speak for itself.
- Trails offer opportunities for research through systematic observation and experimentation.
- Trails make it possible to introduce the study of nature and the environment in a graduated manner, with lessons for all grade levels.
- Trails can foster favorable attitudes toward nature and encourage informed interactions with nature through helping students understand ecological principals illustrated by natural examples.
- Trails help develop an aesthetic appreciation of our natural environment and a desire to protect it from carelessness and harm.
- Trails help develop recreational and attitudinal values through the study of nature.
- Trails open students to creative expression.

## Trail Design and Construction

**Locating the Trail:** A wooded area provides the most potential for a trail because woods are a diverse and complex ecosystem. The location of interesting and outstanding features help plan the actual route of the trail. Look for interesting sites that offer an educational perspective to the trail and later can be made into Educational Stations.

- Look for animal signs - woodpecker damage, beaver activities.
- Look for features that demonstrate cycles, energy flows, succession, species interactions, erosion, disease, and other ecologic concepts.
- Look for variations in habitat type such as woods, fields, stream, wetlands, and disturbed areas.

### Trail Considerations:

- The trail needs to be accessible.
- The erosion potential of the trail should be minimized. A well-worn path could become a gully if not properly located and constructed. Avoid the high erosion potential of steep trails with switchbacks or stone steps.

### Trail Layout:

- Most trails form a loop, usually ending near where they began.

- Trails should be winding to increase anticipation of what is around the next bend. Trails should avoid having long straight stretches.
- If land is abundant, a figure-eight trail provides two trails in one. Use one-half of the eight as the standard loop trail and the entire figure for longer teaching purposes or activities.
- Spur trails can lead from the main route to a special point of interest and back again.

### **Trail Construction**

- The trail is marked off through the woods with survey tape. Since a winding trail is desirable, the trail goes around obstacles like trees or large shrubs.
- Most clearing is done by hand with care to not remove or destroy what is valuable.
- School trails are wider than park trails as students tend to travel in a group. Also, when stopping at points of interest, a gathering area is desirable.
- Do not build the trail too close to fragile sites as the trail will naturally widen over time.
- Brush and logs cut when clearing the trail provide good wildlife habitat and should be left along the trail.
- Prevent the trail from contributing to soil erosion by planting and using water diversion devices.
- Unavoidable wet areas may need big flat rocks to cross on or small plank walkways. Trails going through wet areas need higher maintenance to avoid students walking off the path.

**Maintenance:** Frequently used trail require little maintenance as the foot traffic keeps down unwanted plant growth in the trail.

- Spring and fall trail maintenance workdays can be scheduled to prune back side growth and complete other needed trail chores.
- If poison ivy becomes a problem, eradicate it or reroute the trail to avoid it.

### **Interpreting the Trail**

**Increasing Awareness:** Nature study is an evolving process. Interpretation of interesting points along a trail increases the understanding of and familiarization with nature. Trail interpretation has been defined as "the problem of bringing the subject matter and audience together with communicating information and understanding that will make the walk enjoyable and appreciated."

**Trail Calendar:** Developing a trail calendar of when plants flower or different animals are the most noticeable helps students appreciate the effects of seasons on nature. Posts can be staked in the ground where brief wildflowers will come up in the spring to help students and teachers know where to look.

### **Factors in Trail Interpretation**

- Curriculum objectives for different courses.
- Outstanding or dominant features of the trail and trail area, such as a large trees or wetlands.
- Special interests of the students and teachers.

- Age-level of the students using the trail.

**Trail Stations:**

- Special features along the trails marked by signposts serve as specific stations along the trail.
- A self-guided interpretive booklet which corresponds to special features of the trail helps explain them.
- The average school nature trail has between 10 and 25 stations.
- More stations are placed at the beginning of the trail when motivation is high and then spaced farther apart towards the end.

**Trail Guide:** A simple trail guide introduces students and teachers to the trail. A trail map shows the shape and length of the trail and station locations.

### **Nature Trail Lesson Plans**

**Support the K-8 Science Curriculum:** A nature trail can be used by teachers to help children learn the science standards set by the state. Several of the TN State Department of Education learning objectives are outlined below:

- The student will investigate how living things interact with one another and with non-living elements of their environment.
- The student will understand that living things have characteristics that enable them to survive in their environment.
- The students will examine interrelationships among plants, animals, and their environment.
- The student will study the basic parts of plants, investigate how plants produce food, and discover that plants and animals use food to sustain life.
- The student will recognize the differences among plants and animals of the same kind.
- The student can classify an organism according to the environment in which it can best survive.
- The student will recognize the distinction between living and non-living things.
- The student will realize that organisms use their senses to interact with their environment.
- The student will recognize that the environment and the organisms that live in it can be affected by pollution.
- The student will explain how plants and animals depend upon each other and the non-living elements of an environment to meet basic needs.
- The student will realize the value of land protection and conservation of natural areas.

**Other Related Curriculum Possibilities:**

- Writing Skills: descriptive writing, writing from different perspectives (that of a bird's or a frog, for example), the history lived through by the oldest tree.
- Art: leaf rubbings, still life, collages, sketches.
- Mathematics: shapes and patterns, area measurements, use of measuring equipment.
- Social studies: "Rules of the Nature Trail", making a relief map of the trail area, social interactions of the creatures living in the area, land management and protection.

# **Martin Elementary School Nature Trail**

**OWCA has partnered with Martin Elementary School and the landscaping and forestry classes of CCHS to develop a nature trail as an outdoor nature education classroom.**

**Existing nature trail:** The trail was developed during the early years of the school, but it has not been used by many teachers and students.

**Disturbed Area:** During the school's construction, soil was taken from this site to level the ball fields. Construction material from both Martin and building projects at the high school were dumped here. The school system has now removed most of that construction waste from the site. OWCA will remediate the site to mitigate further soil erosion. The area could be developed for several interesting nature education projects

**Potential Trail Extension.** The existing trail could be extended along the stream and into the older growth wooded area, depending upon the school's interest in doing so.

The Obed Community Association has as its purpose community appreciation and volunteer involvement in ongoing appreciation for our natural and cultural heritage of the Obed River watershed within Cumberland County. Louise Gorenflo, OWCA community educator, produced this fact sheet. Those wanting to join this membership organization or more information may contact Dennis Gregg, OWCA director, at 484-9033, 85 Hood Drive, Crossville, TN 38555.