

Using Outdoor Resources to Learn Science

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SCHOOL CAMPING IN NORTH CAROLINA

Three school camps were held in 1950 in North Carolina by the Salisbury City Schools, one for eighty-seven sixth graders, one for forty-two high school biology students and one for sixty-six teachers. All were held at the Kings Mountain State Park in South Carolina, the children's camps lasting five days and the teachers' camp three days.

There was a great deal of similarity in the three separate camps in the pre-planning, in the program at the camp, in the way resource people were used and in the projects undertaken.

Superintendent J. H. Knox chose principals as camp directors and appointed committees of teachers, principals and supervisors to plan and execute the three programs. Teachers and supervisors served as staff in the two camps for students. Resource people from the Health Department, Extension Service, Soil Conservation Service, Forestry Service, Department of Conservation and Development, Wildlife Resources Commission, Park Service, State Geologist's Office, and the Department of Public Instruction were used to assist the staff in the instructional program.

The program was organized around





the fields of forestry, soil and water conservation, wildlife, geology, and nature study. Projects were selected where the children could do the work and learn the principles of resource management through participation.

The resource people were asked to assist on specific activities and instructed to limit their talks and instructions. Every effort was made to "learn by doing." Evening periods were arranged for questions, films, and short talks.

These were some of the projects and activities in the three camps:

FORESTRY

1. Learned how to transplant trees.
2. Planted a "camp tree" as well as some seedlings.
3. Studied and compared ten posts around the parking lot to see how trees grow.
4. Selected trees which should be thinned in a fourth-acre plot.
5. Measured the board feet of ten trees and computed the value of them.
6. Studied trees in the camp area and

- learned how to identify fifteen of them.
7. Examined a forest fire fighting truck.
8. Viewed "Dead Out," a film on forest fire fighting.

SOIL CONSERVATION

1. Studied the signs of erosion about camp.
2. Examined the old terraces on the old farm now being used as a park.
3. Examined the soils of camp in the fields, woods, above and below terraces, etc., with a soil auger.
4. Planted a roadside area to stop the erosion and to beautify the entrance to camp.
5. Brushed a "galded spot" to stop erosion.
6. Built some stone barriers in gullies along the road to prevent silting in culverts.
7. Placed some log barriers across paths in the camp which were eroding.
8. Viewed some films on soil conservation and modern agriculture.

WILDLIFE MANAGEMENT

1. Planted *Lespedeza bicolor* and *Multiflora* rose along the edges of the fields.
2. Studied signs of game birds and mammals

in camp area.

3. Trapped small mammals to see availability of food for larger animals.
4. Collected fish foods in the stream near camp. Studied them under a bioscope.
5. Participated in casting on the lake.
6. Examined specimens of fish, birds and mammals loaned by the State Museum.

NATURE STUDY

1. Explored the camp environment and learned:
 - 10-15 birds.
 - 10-15 trees.
 - As many amphibia and reptiles as could be located.
 - 10 constellations.
 - 10-15 wildflowers.
2. Examined three quarries near camp—mica, feldspar and barite (teachers' camp).
3. Identified and sprayed poison ivy around the camp with 2,4-D.

HISTORY

1. Examined the battle ground of the Revolu-

tionary Battle of Kings Mountain.

2. Heard a talk at the Park Museum on the battle and the history of the area.
3. Visited an old Revolutionary Church enroute to camp.

AGRICULTURE

1. Visited a dairy farm to study modern agricultural practices enroute to camp.

FOLLOW-UP

The students prepared notebooks on the projects at camp and reported their experiences to those unable to attend. Children, parents and teachers agreed that they had learned so much that was valuable and that could not be learned inside the classrooms, that Salisbury was ready to continue school camping as a regular part of the school program.

These three pilot camps in the State will do much to encourage other school systems in North Carolina to undertake similar camps.

Outdoor Resources for Learning Science

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SCIENCE IN THE OUT-OF-DOORS

Many of the things with which science deals are in the out-of-doors. The environment in which man lives, made up of what some call "Mother Nature," is teeming with life—plants, animals, and an infinitesimal number of living beings. Then there is the physical environment—the air, water, and soil—which so many take for granted in modern society. All of these things make a difference in man's living. Yet, when they are studied in our traditional science classes, they are treated largely as abstract facts; or, in the event a laboratory is provided, the natural things are pressed, preserved,

and pickled, and stored in dingy classrooms.

THE OUT-OF-DOORS—AN EXPERIMENTAL CURRICULUM

Learning science in the out-of-doors, whether it be in camps or through field trips and excursions, is sound educationally. It can be proved, by countless documents, that learning takes place best when the learner can have a direct experience or when he can at least see the objects about which he is being taught. "Learning by doing" is an old adage, but one that is curriculum wise. Thus outdoor education, whether it be for science purposes or for many of the