UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HORACE M. ALBRIGHT TRAINING CENTER
Grand Canyon, Arizona

USING CONCEPTS IN OUR INTERPRETIVE PROGRAM

by
Russell K. Grater

For many years I have been impressed, and somewhat concerned, with the manner in which the visitor is being informed regarding the factual aspects of our parks and monuments. Exhibits in Visitor Centers are being carefully worked out and worded to present the vast array of scientific and historical data in the most interesting way. Our guided hikes are designed to acquaint and inform each visitor with the origins of its rock formations, mountains and canyons, its glacial and volcanic features, the names of the animals and plants and how they may be recognized, and any historical materials that may be encountered. Our illustrated talks at the campgrounds and lodges continue the pattern. All of this is excellent. The visitors have received much from such a program, but it is not flawless. Somewhere along the line the visitor often fails to come to a full realization of the real significance of what we are showing him. He too often is brought so close to the attractions of the park, given so many details about these features, that he misses completely the simple, but powerful, processes going on in nature by which these attractions have been brought into being. Somehow we have failed to introduce him to the basic concepts that operate in nature--concepts that have little relationship to the names of rocks or rock formations, the mechanics by which a glacier works, or the names of animals or plants.

Let us examine what I call "basic concepts," and how we might use them. There are many concepts in nature, but some are vital factors in the makeup of a park or monument. The following comments (among others) are of primary concern and serve to illustrate what I mean:

1. There is constant change in the earth's surface.
2. Water plays an important part in earth change.
3. Plants and animals play an important part in earth change.
4. Temperature and climate are related to each change.
5. Time is infinite--and immediate--in nature.
6. Plants and animals relate to each other.
7. All nature is an inter-related whole.

To understand these concepts does not require any special knowledge on the part of the visitor--but to understand them unlocks the story behind any key feature of a park or monument. Through them one learns how and why changes in landscape are brought about, the importance of time and space, and the relationship of life to the overall story. With this knowledge, the story behind any key feature becomes easily understood and the pieces of the picture drop quickly into place. Thus, to better grasp the story of such a place as Yosemite Valley, one should first understand the forces in nature that ultimately created the valley.

To get the visitor to quickly absorb these concepts entails a somewhat different method of presentation than what a naturalist has been in the habit of using. The method commonly in use has the naturalist explaining the park features as he goes along on a hike (or during an illustrated talk) with the visitors forming a listening and (sometimes) questioning audience. The method that I suggest reverses this process, and the naturalist draws upon the visitor for bits of knowledge to build up the story he wishes to tell. He makes the visitor an active participant in the program rather than a passive listener. This is accomplished by the naturalist simply guiding the thought on the concept he wishes to develop, giving each visitor in the party a chance to add his views and knowledge to the group total. Occasionally the naturalist may have to fill in a detail not known by any member of the party, but this is not common. However, his main function is that of a discussion leader rather than that of an instructor. He asks such questions as:

1. What do you suppose it is doing here?
2. How does nature use it?
3. How does it operate?
4. What is going to happen to it?
5. Is it like others or only similar?
6. If it isn't like others, why isn't it?
7. Is it of any importance to man?

With this type of question, the naturalist draws from the visitors the information that he needs to develop his thought. In the process various things have happened. Some of the most important are:

1. The visitor has become an active part of the planned program.
2. By contributing information, the visitor has made himself into an interested listener.
3. The visitor becomes alert to what is around him, as he draws upon all his senses of sight, hearing, smell, taste, and feel in order to come up with the desired information.
4. It gives the visitor a chance to express his views.
5. It encourages him to ask questions by making him "one of the group."

6. It does not set the naturalist "apart" from his group--rather, he becomes part of it.
7. The naturalist guides thought on various subjects; he does not just tell.
8. The visitor becomes aware of the vast field of subjects and interests met in nature.
9. The visitor has found that he can learn much about nature and how many things in nature operate if he cares to do so, and without great effort involved.
10. He has been taught something which he will find easy to remember and apply wherever he goes.

All of this might appear to require a naturalist with unusual talents to carry out such a conducted trip, but actual experience has revealed that the reverse is true. Persons entirely unskilled in the field of natural science have been trained to become very effective in only a matter of a few days. The method is simple to learn--only the information required (an average naturalist's knowledge of the natural sciences, history and archeology) constituting any problem.

I believe the same basic approach to concepts used in the field also can be used to advantage in designing exhibits. Here, as in the field, a theme can be selected and through concepts, be developed along simple lines to tell the story. The Yavapai Point Observation Station at Grand Canyon touches on this method briefly, but effectively, when it introduces the story of how the canyon is being cut by calling attention to water and silt and how, in combination, they create the carving agent that has brought the canyon into being. However, the concept method stops at that point.

The use of concepts, and the method used in putting them across to the listener, is believed to be very sound. It has been tried on a broad scale in similar situations to those encountered by our naturalist staffs. It is not experimental; it has been proven over a two-year period of time. Possibly others have had occasion to experiment with it. It is believed such a program would prove to be helpful in our areas if given a trial.

(SEE ATTACHED OUTLINE)

SUGGESTED BRIEF OUTLINE FOR A HIKE TO TELL
THE GEOLOGIC STORY OF YOSEMITE VALLEY

I. Review with your group objectives before leaving on trip.

A. Encourage group to use five senses and to look for things.

II. Let them first "explore" and discuss whatever may be brought up.

A. Work around to the story of rocks.

1. Choose two rocks--different in color.

a. Discuss.

(1) Bring out not all rocks alike.
(2) When formed?
(3) From what?
(4) Demonstrate "fire" rock by hitting two pieces together.

b. How did it get here?

(1) Locate fractures in walls.
(2) Discuss earthquakes.
(3) Discuss uplift.

c. What happened to overlying thickness.

(1) Story of erosion.
(2) Baked rocks to westward and what they represent.
(3) Sands, gravels and dirt in San J. Valley and what they mean.
(4) Develop story of tilting--why would rocks to west be layered while there are granites in Yosemite?

d. Forces that control erosion.

(1) How does a rock break down?

(a) Effect of roots.
(b) Effect of acids.
(c) Dissolving power of water.
(d) Erosive power of water.
(e) Temperature changes.

(f) Work of ice in cracks and on cliffs.
(g) Running water when carrying abrasive.

e. What has happened here?

(1) See what forces were involved primarily.

(a) Round rocks and what they mean.
(b) Polish on cliffs and what it means.
(c) Shape of valley.
(d) What sort of soil is group standing on.
(e) Was valley always this wide at bottom?
(f) Was it always this flat?

(2) Why aren't there boulders in the valley like along the river near El Portal?

(a) Buried or carried away--or both?
(b) Develop what valley fill is.

1. Where did it come from?
2. What is it?
3. Why did it stop here and not go on down the river?

a. Must have been something to stop it.
b. Story of dam and valley fill.

III. Have brought out the facts of valley so review and put together.

A. Area once underground.
B. Now elevated and area tilted.
C. Erosion has removed overlying formations.
D. Erosion has been aided by many things.
E. The canyon has been largely cut by water.
F. The canyon has been scoured by ice.
G. The canyon has been damned up and filled.
H. The process is still going on.

(This is only one of several approaches that could be used to present this story.)