Assessing the Educational Impact of Zoos

by Bill DeRosa

C

an going to the zoo be a valuable educational experience? Many of us would automatically answer this question affirmatively. Indeed, it has long been thought that zoos cannot provide children with high levels of exposure to animals and thereby help to increase their knowledge of wild animals and animal habitats. Along with increasing children's knowledge, many people feel that zoos are valuable resources for helping to create and reinforce children's positive attitudes toward animals as well. While most of us have some reservations about zoos—including reservations about the methods used to obtain animals (were they captured from the wild?); the suitability of the exhibits for meeting the animals' needs; and, perhaps, whether it is justifiable to keep wild animals captive at all—we often assume that zoos can at least contribute positively to children's knowledge and conception of nature and animals.

What Research Tells Us

One recent study, however, calls into question some of our assumptions about the educational impact of zoos. In 1983, Susan F. Swensen, a graduate student at Yale University, conducted a research study titled "Comparative Study of Zoo Visitors at Different Types of Facilities." In her study, Swensen looked at four zoos located in different parts of the country and compared them to an "average" urban city zoo in Connecticut. Among the zoos examined were the New York Zoological Society in New York City, the San Diego Zoo in San Diego, the San Francisco Zoo in San Francisco, and the Brookfield Zoo in Chicago. The three zoos, which were located in urban areas, were compared to the average urban city zoo in Connecticut. The fourth zoo, the National Zoological Park in Washington, D.C., contained mostly naturalistic exhibits and was followed on the scale by the San Diego Wild Animal Park, which contained all large, naturalistic exhibits.

To conduct the study, Swensen developed two tests designed to examine zoo visitors' understanding of wildlife before and after their zoo visits. Both the pretest and posttest contained twenty true-false questions, worth two points each, on topics such as endangered species, taxonomy, habitat preferences, and social characteristics. The tests were administered to twenty-five visitors from each of the four zoos. At each zoo, the test study sample consisted of white, adult members of family groups and contained twelve men and thirteen women.

What did the tests show? Overall, the average knowledge score for the visitors at the four zoos on the posttest combined was low—53.36—relative to the highest possible score of 80. Analysis of the total knowledge scores from both the pretest and the posttest revealed significant variations in test scores among the four zoos. On the average, visitors at the small city zoo in Connecticut were significantly less knowledgeable than respondents at the other zoos. However, further analysis pointed out that this variation was a result of demographic factors—particularly the education and sex of the visitors—and not to the type of zoo. Analysis of the change in test scores from pretest scores revealed that posttest scores were actually lower than pretest scores (perhaps because of more difficult questions on the posttest) and that relative change in knowledge was not significantly different among the four types of zoos.

Further investigation by Swensen revealed that these results may be attributed in part to the fact that the visitors at the four zoos generally made little use of educational aids such as signs, maps, etc., while viewing the exhibits. Such behavior supports research that has shown that zoo visitors tend to regard their zoo experience as a recreational outing rather than an educational event.

Implications for Teachers

The results of Swensen's limited research suggest that if a zoo visit or field trip is to be a positive educational experience for young people, it may be necessary for the teacher or humane educator to play an active role in ensuring that outcome. Educators should prepare students in advance by discussing the animals and habitats they will encounter on their visit. Materials to facilitate such discussions may be available from some zoos. With older students, you may want to discuss the ethical implications of zoos.

Once at the zoo, encourage students to make use of the interpretive aids provided by the facility such as signs, maps, pictures, guided tours, audio tapes; and education rooms, which often contain hands-on exhibits and activities. If students notice an animal displaying strange or "amazing" behavior (such as pacing, begging, licking its cage, pulling at its hair or skin, or being excessively aggressive), explain that this is often abnormal behavior brought on by the stress of confinement or by improper care and nutrition. Ask students whether they think the exhibit is viewing an animal suited to the animal's needs. Does the exhibit give a realistic picture of how the animal behaves in its natural habitat?

Although Swensen's study suggests that there is little difference in the impact on knowledge among the four types of zoos, it may well be that there are differences in the ways certain types of zoos influence children's attitudes toward animals. Prior to the field trip, you may want to visit the zoo yourself to determine if it is a facility designed to foster a sense of respect and admiration for animals or merely to provide a source of amusement.

by Geri Chappell

H

uman education for secondary school students needs not be difficult or expensive. I recently developed an animal trivia game with the help of my high school students; and because it was enthusiastically received by them and my supervisor, I would like to share the basic format with you.

Editor's Note: Although the activity described below was developed for secondary students, consider adapting it for middle and upper elementary grades as well.

Animal Trivia Game

1. Explain to the class that they are to research the animal kingdom and obtain meaningful questions and accurate answers to develop a trivia game based on this subject. (I use this form in lieu of a term paper for average-level students.)

2. Have the students decide upon the various topics to be investigated. Some that we used were:

- Endangered Species: Jungle Animals
- Reproduction: Adaptation
- Behavior: Migration
- Veterinary Work: Habitat
- Pet Care: Working Animals
- Diseases: Humane Societies
- Feathered Friends: Sea Life
- Hibernation: Diet

Note: You may wish to emphasize those topics that go beyond simple animal facts, such as the captive wildlife trade; intensive farming; the pet overpopulation problem—yesterday and today.

Are you interested in conducting humane education research? If you are, you will want to learn more about NAHAE's Humane Education Research Grant Program. This program can provide up to $1,000 per individual toward the costs of conducting a study relevant to the theory and practice of humane education. If you are a shelter educator, classroom teacher, school administrator, college student; or professor and would like a copy of the grant guidelines and application procedures, please contact:

Bill DeRosa
Research Assistant/NAHAE
P.O. Box 362
East Haddam, CT 06423

3. Ask each student to choose one topic.

4. Have students obtain books, magazines, encyclopedias, brochures, and other sources that have appropriate information.

5. The daily assignment is to complete five 3 x 5 inch cards. On each is the following:

Side one: a question, phrased in the student's own words, in a complete sentence, using correct English.

Side two: (at the top of the card) an accurate answer to the question appearing on the other side. At the bottom of the card, this reference information:

Title of Reference Book
Publisher
Page Number
Author
Publishing Date
Student's Initials

6. As each group of five cards is submitted, a daily grade is given on the caliber of the material.

7. When enough research has been completed (I allow two weeks), the last day is set aside for playing the game. Have the students divide into teams. Each team takes a turn reading a card for the other team whose members must answer. Allow one point for each correct answer.

I found that using an animal trivia game was a great way to teach humane education and, at the same time, stimulate students' interest in typical research. While the class was locating appropriate data on their particular topics, there was a continued exchange of information, as they gained knowledge about animals. The students thoroughly enjoyed researching and organizing the game. It was probably the first time they actually found research work pleasurable."

Just for Students

Looking for a handbook for students on endangered species? Take a look at NAHAE's children's brochure titled Endangered Animals. Written for grades 3-8, the brochure provides background information on endangered species and is available for 15 cents each or $4 for 50 copies.