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TEACHING CHILDREN ABOUT ECOLOGY: SCIENTISTS STUDY HOW ZOOS AND MUSEUMS CAN ENHANCE INFORMAL LEARNING

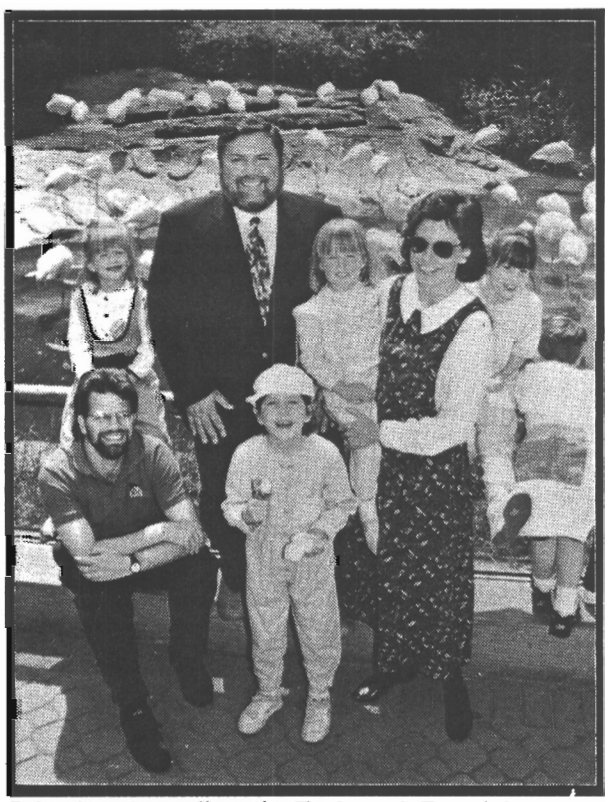
What kind of zoo and museum exhibits best educate children about issues such as the need to protect endangered species?

That's one of the fundamental questions scientists from the Georgia Institute of Technology and Zoo Atlanta hope to answer through a joint research effort that will explore a wide range of zoo design issues. Project recommendations may help chart a new course for zoo and museum exhibits aimed at children.

"Zoos have changed from their historic goals of entertainment to new goals in conservation and public education," explained Dr. Jean Wineman, associate professor of architecture at Georgia Tech. "The question is how to translate those goals into the children's environment."

Zoos and museums provide children with opportunities for "informal learning" to supplement the more formal school environment. While educators agree on the value of informal learning, little information currently exists on how exhibit design may enhance that process.

"The zoo should provide an opportunity to enhance the learning experiences of children," said Wineman, who is conducting the study with Graduate Student Craig Piper. "This project will provide broad-based guidance for zoos and other museums that deal with children's educational exhibits."



Scientists from Georgia Tech and Zoo Atlanta are working together -- and with zoo visitors pictured here -- to make recommendations on how exhibits can meet the needs of children. (Color/B&W Avail.)

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In some cases, overall zoo strategies -- such as natural "landscape immersion" exhibits and the use of technology to provide information -- may be at odds with the goals of educating children.

For example, placing an animal into a simulated natural habitat allows zoo visitors to feel they are viewing the creature in the wild. But the natural setting can make the animal difficult for children to see and may prevent the kind of close contact that makes the experience especially valuable for children, Wineman noted.

Dr. Jean Wineman and daughter Maisie feed a sheep at Zoo Atlanta. (Color/B&W Avail.)

"Experience with live animals is the whole purpose of the zoo visit," she said. "It carries with it a lot of emotional charge, and that stimulates learning and interest. It is important for the learning experience to design space that carries that impact."

Modern interactive computer technology helps zoo visitors obtain more information about the animals they are seeing. But for children accustomed to the entertainment of video games, the technology can detract from their experience with animals. One of the intents of the project is to explore innovative ways to achieve a balance between high technology educational support and direct animal contact experiences.

The Zoo Atlanta/Georgia Tech study will suggest how new exhibit strategies may help resolve these sometimes conflicting goals. One answer, said Wineman, may be to integrate children's exhibits into the entire zoo, eliminating the need for a separate children's area.

To help gain new ideas, the project sponsored a two-day workshop for zoo and exhibit design experts May 3-4. Input from the attendees will be used to formulate design recommendations.

Zoo Atlanta Director Dr. Terry Maple said the project's recommendations will help Atlanta's planners design "a children's zoo unlike any other you have seen." The work will also foster university research relationships he believes will make Zoo Atlanta a leader in scientific study.

"We are on the verge of integrating science, conservation and education like no zoo has ever done before," he said. "The reason we can do it is our very strong relationships with the local universities."

Collaboration with Atlanta-area universities, Maple added, "gives us the human and technical resources that may not be readily available to other zoos. Some of the brightest people in areas of science and technology are available to us."

What will that mean for the nearly 800,000 people a year who come to Zoo Atlanta?

"Visitors will get a smarter zoo and they will see animals that are exhibited more effectively because we know more about them and can use state-of-the art technology to provide people with more information in better ways," he explained.

One of the goals is to make Zoo Atlanta "the most computerized zoo in America." Maple, a Georgia Tech professor of psychology, even envisions a zoo management simulation to help students understand complex issues involved in maintaining endangered species. Such simulations would be possible because of technological assistance from the universities and because Zoo Atlanta maintains information from its own study of the animals.

Other technology might allow children seated in a planned 400-seat auditorium to take an interactive real-time visit to a swamp or other wild location.

"We want to expose kids to the bush experience and let them ask questions of the staff out in the swamp," he continued. "Through a combination of technology, face-to-face encounters with real scientists and the draw of our animal collections, we will bring kids a better understanding of the value of wildlife and wild places."

Since 1984 when Maple became director, zoo attendance has jumped from 250,000 a year to 798,000, while the number of supporting members -- known as Friends of Zoo Atlanta -- grew from 3,000 to 50,000. Corporate and other sponsorships have funded the renovation of approximately half the 100-year-old zoo. A second phase with a $26 million price tag will include the children's zoo.