

# **Interactive Areas...**

## **An Educational Alternative in the Zoos**

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### **INTRODUCTION**

Through the evolution of zoos, education programs have been developed to the extent of being considered as pillars of the modern goals of these institutions. Zoos use many diverse didactic programs. Education in a zoo or aquarium is not limited to looking at animals and reading information about them. The resources that can be applied are very varied and, in particular, they have to be highly interesting, attractive and effective, so the visitor can absorb what we want them to through these programs. One educational resource that has been used as part of informal education programs, is interactivity, a method based on offering practical experiences where the visitor is actively involved in discovering information or analysing an event for example.

Robert Semper suggests in his article “Science Museums as Environments for Learning”, that interactive areas provide learning resources for communities of all ages. Interactive experiences motivate children, young people and adults to be more curious and thus to understand how and why things happen. In addition, “experience play” or “play to experience” are the means by which we can better appreciate the present situation of our environment.

### **HISTORY**

The history of interactivity in zoos started in the late 1970s and early 1980s with the appearance of contact areas, children’s zoos and individual materials produced by the educators for use as a tool in their talks and around the zoo.

Sherman Rosenfeld, in his article “Interactivity in Learning” (1987), mentions a number of zoos that are starting to include spaces where people can touch, smell or listen, as part of the zoo experience.

In the science room of San Jose Zoo’s Children’s Zoo there are exhibits demonstrating the way animals see. In the primates room of San Francisco Zoo’s Discovery Center, the visitors are invited to compare the adaptations of their spinal column and skull with those of apes.

In 1977, the National Zoo in Washington D.C., opened ZOOLAB, a room offering interactive tools to the visitor, such as eggs, feathers, animal furs, skulls, skeletons, and examples of animal diets. This program won the approbation of the American Association of Zoological Parks and Aquariums (AAZPA), now AZA, winning them the award for the best educational program in 1978. This success motivated the creation of their BIRDLAB at the end of 1978, and their HERPLAB in 1982.

Zoos like the Bronx in New York and the Copenhagen Zoo in Denmark (1986), are starting to design children’s zoos, where visitors can not only touch or feed an animal, but are able to participate in learning activities about natural processes that are mostly outside of the experience of a kid that lives in a modern city with access to modern technology.

In 1987, in the European Zoo Educators Conference, held in Copenhagen, Denmark, Sherman Rosenfeld himself emphasized that if we want to invest wisely in the future growth of the education programs in zoos, we have to design areas that satisfy the visitors’ curiosity via direct participation.

So we enter a new era where most of the zoos and aquariums across the world are offering interactive elements in their school programs. It is accepted by everyone that the best way a child can learn, is by experiencing things for himself.

The Saint Louis Zoo, in St. Louis, Missouri, at the beginning of 1990, opened a whole interactive building, called “The Living World”, where animals and cutting edge technology are combined, so the visitors can spend all day learning about Ecology with biodiversity as a focus. It includes a theater for 400 people, where they show high quality movies about “the living world”. There is no doubt about the success this area has enjoyed, and above all, the acceptance by the education departments in the United States.

Mexico has now developed an interactive learning center named “La Guarida”, (‘The Den’) within Guadalajara Zoo, not only the first of its kind in Mexico, but in Latin America.

### METHODS

“La Guarida” opened in October of 1998, the main object being to offer a high quality educational alternative for our visitors, that could be an extra tool by local teachers, and parents. The development of our project was based on the theme of this article, interactivity.

We know that one of the elements on which the interactivity concept is based, is that children and adults can learn through play, but how exactly does this work? For me, healthy childhood development depends to a large extent on the activities that children carry out in relation to the game, so it’s important that the methods used in the game bear upon the following aspects of their lives:

- **SOCIAL ASPECT:** because it involves the coordination of activities with one or more partners, most of the game forms work in a natural way between boys and girls of similar ages. Also, it can strengthen the relationships between children and adults if they participate in a play activity in a combined way.
- **CREATIVE ASPECT:** as the children have the freedom to test new ideas in the game, it stimulates the imagination, which is the base for the creative development
- **PHYSICALLY:** it provides total body exercise and helps develop coordination.



*Visitors finding out about the distribution of different ecosystems in Mexico*

- It helps with **INTELLECTUAL DEVELOPMENT** in a problem-solving environment because you learn to make judgements and analyse data in an informal way.
- The game provides a feeling of **SECURITY AND SELF-ESTEEM**, because it makes the children the owners of the environment in which they are playing.
- The rules of the game prepare the individual to **ACCEPT LIMITS**, both in their immediate reality and in a wider social dimension.

Having clarified these elements, “La Guarida” looked for having a main concept and therefore it will be involved in the pursuit of that history. Unlike many other interactive centers and museums, “La Guarida” has a character, who lives in a hole in a tree. The knowledge he has gathered about the environment forms the basis of the story that he will tell the visitors. We have three themes: Ecosystems, Animal Characteristics and Animal Adaptations.

From our experience we can highlight some considerations in the design of an interpretation or interactive area:

- **MODULE DESIGN:** it essential that the design of every exhibit should be attractive, easy to interpret, and be easy to operate, all this to offer a better quality in the service; it should also appease that the public has the enough time to discover the procedures that they are looking for. Each module should have an objective, an interactive experience, and they should offer additional knowledges, besides of the main

theme; it should be adapted for handicaps and it should also count with enough space to put an explaining sign and how to use it.

Judie Diamond in her study about family behaviour in science museums, reports that many people spend a period of less than one minute in each one of the exhibits but there are other groups that spend between five to fifteen minutes per module.

The visitors choose the subject they are more attracted to, and so they decide the amount of information they want to include in their learning process.

In the case of “La Guarida”, there are four modules on which the public spends more than one minute. These modules are designed to use not only the sense of touch, but also vision and hearing. The specific subjects that are treated in these modules are: - Animal coverings-, in which the visitor can touch different kinds of furs, shells, whiskers, eggs, etc. Another module is the –‘Tracks in the stone’, where a giant rock has several animal tracks encrusted in it, and so visitors can compare the size of each track with their hand; it also has a peephole inside through which they discover the owners of the animal tracks. There is also the module called ‘The sounds of the animals’, where visitors, through a phone, can listen to different animal sounds. It is worth mentioning that one of the most popular modules is, ‘The Spider and its Web’, where the child or adult wears a special suit, pretending to be an insect, and then, through a swing, they will get stuck in a velcro spider’s web. The object of this module is that the visitors can understand why it is so difficult for an insect to survive when it gets caught in a spider’s web, differentiating it from the traditional spider’s web games, where the child only plays with it, but never experiences the feeling of being caught.

- **ADAPTATIONS FOR THE DISABLED** we can’t forget that interactivity is a basic tool for work with disabled people. These centers stimulate the senses, essential in working with many kinds of handicap.

- **LONG LASTING MATERIALS:** the materials that will be used for the design of any interactive area, have to be very resistant, light, attractive and above all, they should be easily obtained in your locality. The materials used in “La Guarida” are, in most cases, compressed wood, Formica, MDF, flexiglas,



***This Display Allows People to feel what it’s like to have horns and explains the difference between horns and antlers***

acrylics, glass fiber, cd roms, computers, mirrors, videos and modified public telephones.

- **MAINTENANCE:** most of the success that the interactive center has, depends on the maintenance given to the room; a broken module makes the visitors to take a very bad impression of the place and above all, it limits their learning and devalues the exhibition.

- **GUIDES OR INTERPRETERS:** in any interactive area of any size, it is important to use an interpreter or guide, who acts as a link between the public and the exhibit. If a visitor on his own is unable to interpret the exhibition properly, there should be a guide who can help the visitors and offer them the knowledge.

In the case of “La Guarida”, “The Bugs” are our main character’s assistants. Every day they attend the general public and also school groups besides controlling and protecting the equipment. “The Bugs” are a group of young enthusiastic people studying at high school or college.

## EVALUATION

Since opening three years ago, “La Guarida” has had more than 720,000 visitors, who have come for half-hour and one hour sessions in the case of the general public and school groups respectively. Guadalajara Zoo receives on a normal Sunday, around 6,000 to 8,000 visitors, and on a Sunday during vacations this can rise to 14,000 visitors, of whom, even with half hour sessions only 3,000 can be admitted to the center.

While there are many ways to develop learning experiences, interactivity is one of the most complete. As a kind of informal education, it allows one to reach all sorts of audiences and so the interactive centers are educational institutions, but not schools. The learning within these centers happens in a social context; people visit them and relate to other family members, with friends, partners, teachers, and they do this consciously and unconsciously, so there is a mix of sexes, ages, experiences and knowledgements.

## BIBLIOGRAPHY

- Bailey, Elsa. 1990. REVIEW OF SELECTED REFERENCE FROM LITERATURE SEARCH ON FIELD TRIPS. School group visits to museums. Association of Science & Technology Centers. ASTC, Education resources.
- De la Cruz, Angelina. 1998. PRINCIPIOS DE LA EDUCACIÓN EN UN MUSEO. Material Taller práctico Encuentro de Promotores de Cultura Infantil. Guadalajara, Jalisco.
- Feher, Elsa. 1998. LEARNING INCIDE THE HEAD. Association of Science & Technology Centers. ASTC, Education resources.
- Hein, George E. 1997. THE CONSTRUCTIVIST MUSEUM. American Association of Science & Technology Centers. ASTC, Education resources.
- Lars Lunding Andersen. 1987. EDUCATION / INTERPRETATION – trends of the future. Zoo Copenhagen. European Zoo Education Conference.
- Rosenfeld, Sherman. 1988. INTERACTIVITY IN LEARNING. EZE Conference proceedings. Copenhagen, Denmark.

- Semper, Robert J. 1990. Physics Today. Vol. 43. No. 11. pp 50-56. SCIENCE MUSEUMS AS ENVIRONMENTS FOR LEARNING.
- Serrell, Beverley et al. 1990. WHAT RESEARCH SAYS ABOUT LEARNING IN SCIENCE MUSEUMS. Association of Science & Technology Centers. ASTC, Education resources.
- White, Judith & Barr Sharon. 1984. FAMILY FROGS AND FUN. Office of education. National Zoological Park Smithsonian Institution. Washington, D.C.

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