



ASSOCIATION OF YOUTH MUSEUMS



Curiosity, the desire to know, the need to touch and handle and feel and to ask questions, seems to be a basic human characteristic. In the museum setting, particularly, we need to think about ways in which the environment and other people either encourage the expression of curiosity or block it off.

—Caryl Marsh, Ph.D.



PlaySpace

Involving Very Young Children in the Museum Experience

By Gretchen Jennings,
American Psychological Association

The father glances up while three-year-old Kathryn plays intently at the water table. He has spent time on the floor playing dolls with her, has chatted with staff and with other parents, and has read an article or two from the parent resource files. Meanwhile Kathryn has hidden under the climber as well as made her way to the top; done some fingerpainting, and is now pouring water from one container to another with great concentration. Her father smiles and shrugs: "Who says children have short attention spans? We've been here an hour, and she doesn't want to leave." When the time finally does come to say goodbye, there are tears and protests until a staff member puts a red sticker on Kathryn's hand, and sends father and child off with the challenge of finding other red things on the way out of the museum.

This scene has been replayed countless times in PlaySpace, the child development component of the traveling exhibition, *Psychology: Understanding Ourselves, Understanding Each Other*. The vignette contains many of the elements that appear to have made PlaySpace inviting and educational for children, their adult companions, and for visitors in general to the Psychology Exhibition. These elements are:

- A rich variety of carefully selected, developmentally appropriate toys and activities that provide opportunities for children's curiosity to unfold, e.g. at the water table children are exploring the properties of liquids even as they play.
- A requirement that children be accompanied in the space by their adult companion. This provides opportunities for interactions between parents and children, children and children, and staff with children and adults, all of which can be observed by visitors outside the space.
- Well trained staff who are experienced in working with children and adults.
- The modeling of behavior and activities based on an understanding of child development, e.g. PlaySpace staff are trained to deal with difficult situations such as leaving the space; rather than instructing the parents, the staff models appropriate ways of handling such issues.
- A changing schedule of activities such as water play, finger painting, or hand puppets.
- Books, articles, and other parenting resources for adults.
- A comfortable, enclosed space that is safe for young children to roam freely and that is at the same time open, visible and inviting to all who come to the exhibition.

PlaySpace in the Context of the Psychology Exhibit

Conceived as part of the celebration of the 1992 Centennial of the American Psychological Association, *Psychology: Understanding Ourselves, Understanding Each Other* is designed to introduce a broad general audience to the concepts, tools, methods and results of psychological research. The exhibition was developed and produced by the American Psychological Association and the Ontario Science Cen-

tre. It is currently touring science museums throughout the United States under the auspices of the Association of Science-Technology Centers. Support for the exhibition was provided by the National Science Foundation, the William T. Grant and Alfred P. Sloan Foundations, Harvard University, and National Institute for Mental Health.

The content of the exhibition focuses around a number of "conceptual clusters" that reflect major areas of psychological research: cognitive processes such as attending, perceiving, remembering, forgetting; social interactions; mind/body interactions, feelings and emotions; testing; and development across the life span. According to Caryl Marsh, Ph.D., originator and first project director for the Psychology exhibition, "The careful study of how we grow and change over the lifespan is one of psychology's most important contributions. It seemed crucial to include this domain of psychology in the exhibition, and in particular to provide a compelling illustration of what psychology can tell us about the first years of life." Creating a developmental component, Marsh said, would "enrich visitors' appreciation of the richness and diversity of human development." As outlined in her proposal to the W.T. Grant Foundation, Marsh, a psychologist and exhibition developer, envisioned three formats for the developmental component: PlaySpace, a semi-enclosed area for children four and under and their adult companions; a developmental perspective to be threaded through other dimensions of psychological research featured in the exhibition as a whole; and public programs, such as films and lectures, that would focus on developmental issues.

Design and Development of PlaySpace

Dr. Marsh began working in 1987 with Jeri Robinson and her staff at The Children's Museum in Boston on the basic concept and design of the developmental component. Ms. Robinson pioneered the idea of an exhibit focused on early childhood development by creating the PlaySpace Exhibit at The Children's Museum over sixteen years ago. The museum agreed to develop a small test space near their larger PlaySpace area. The design, contents, activities and psychological focus of the smaller PlaySpace were prototyped at The Children's Museum over a period of months in 1987 and 1988. The exhibit description that resulted from this prototype was called *PlaySpace, a Window on Development*. Although the second half of the title was eventually dropped, it reveals the essential character of the space:

The primary purpose of PlaySpace as an exhibit is to provide a warm, inviting play environment for children from birth to four, and their adult companions. It is a place where adults can learn about child development by: watching children at various stages of development as they play; talking with other adult visitors and with staff; reading the exhibit's supporting materials (The Children's Museum 1988).

Designers at the Ontario Science Centre, using the prototype from The Children's Museum, and working with Dr. Marsh and a group of developmental psychologists,

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designed a 600-square-foot-space with four major activity areas:

- A Large-Motor Activity Area, with a climbing structure, where children can engage in whole-body movements, such as climbing, jumping and throwing;
- A Role-Play Area, with dress-up clothes and hats, tools, pots and pans, etc., where children can exercise their imaginations and social skills, trying out different roles and creating and acting out different scenarios;
- A Small-Motor Activity Area, with materials for manipulative play, exploration of basic materials, art projects, music and rhythm activities, where children can engage in activities requiring hand, finger and eye movement and coordination;
- An Infant Area, away from the flow of the other areas, with a floor mat, manipulative toys and a wall mirror; infants can explore and play with a variety of toys, explore their reflections in the wall mirror, and as they are able, move around the space.

The toys and materials in the area are deliberately low tech and have been chosen with an eye to gender equity and cultural diversity. Objects and activities that lend themselves to different levels of play by children at different stages are especially important. The idea is to communicate that appropriate toys need not be expensive and that engaging activities can be created out of materials that are easily available, such as mirrors, water and sand. The furniture and the climbing structure are probably the most expensive objects because they must meet specific standards for durability and safety.

In addition to toys, puzzles and games that might be found in any children's area, the PlaySpace exhibit also contains exhibits based on specific psychological research. For example, two sealed flasks attached to axles on one of the low walls allow parents to reproduce Piaget's conservation interviews with their own children. The flasks are filled with equal amounts of blue water. When both flasks are upright, most children can see that they contain equal amounts of liquid. When one flask is inverted, water flows into its long, narrow neck. Children who have not yet grasped the idea of conservation of volume will say that there is now more liquid in this flask. Nearby label copy explains Piaget's research. Several other similar activities in the space allow parents a vivid and sometimes surprising glimpse into their children's thinking processes.

The low walls that enclose PlaySpace allow visitors in the larger exhibition to observe the children within the space unobtrusively. During the planning stages, designers and psychologists alike were concerned that visitors on the outside might be distracting to the children or make them self-conscious. However, prototyping revealed that the children, as well as the adults, in the space were virtually oblivious to the visitors outside. This has been reconfirmed in the three years that the exhibition has been up and traveling. Label panels are placed on the low wall so that they face the visitors as they look in. The labels direct the visitors' attention to the various activity areas and encourage them to observe what research tells us about particular aspects of development. For example, the label across from the climber discusses the importance of large motor activity and directs visitors to look for children using the climber at various developmental levels, with toddlers taking one step at a time while older children climb with more agility.

PlaySpace stretches in a series of notched extensions from one corner of the exhibition into its center. The low wall that provides safety and a sense of privacy for those inside also has the effect of keeping the space visually open and very much a part of the entire exhibition. Just outside and adjacent to the PlaySpace surround are a series of other exhibits related to the life span: Baby X, an exhibit on gender stereotyping; the Visual Cliff, which demonstrates the development of depth perception in crawling infants; the Lifespan Wall, which looks at the aging process; and Parents and Teens, where visitors can assess family interactions. Thus, in both design and content the PlaySpace component acknowledges the special needs of young children in a museum setting without segregating them entirely from other visitors.

The Visitors

Most visitors to PlaySpace are pairs of adults and children. Children may not be left alone in the space; they must always be accompanied by an adult, whether a parent, friend or babysitter. Most museums have found that it is best to schedule daycare or preschool groups on specific days at specific times, usually on weekday mornings. The dynamic

of the space is changed radically by the entrance of an organized group of children, who have already established patterns of play and interaction. Jeri Robinson of The Children's Museum calls this "continuing the conversation." (For example if there has been an unresolved issue around sharing back at the daycare center, it will surface again in PlaySpace.) Pairs of adults and children in the space at the same time often find this to be overwhelming, says Robinson. While

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other visitors are not excluded when groups are in the space, coordinators have found it is best to schedule groups on days with lower attendance. Coordinators try to remain flexible in accommodating unscheduled groups, handling each situation depending on the time of day and the number of people already in the space. A number of museums have developed crowd control plans, but few have had to use them. The space seems to control itself because adults can see immediately if it is crowded, and usually choose to leave and return later.

Staff try to consistently maintain the age limit of four years and under, explaining that there are space and safety as well as developmental reasons for keeping the space off limits for older, larger children. Again, however, the staff is trained to use its own judgment depending on the situation and the number of people in the space. A number of strategies have been developed for dealing with an adult who is alone with a child under four and one who is too old for PlaySpace. Activity sheets are available that the adult can either give the older child or use with both children in the exhibition. At times the older sibling may be allowed to come into the space. Many of these situations are considered through the use of case studies and problem solving during staff training.

Staffing and Training

Staff members are trained in early childhood development and have had experience working with young children in a daycare, preschool, or children's museum setting. They have had experience talking with parents about infants and children, and are comfortable doing so. They are informed about, and aware of the complexity of

...contemporary issues having to do with young children. Above all, they truly enjoy watching children play, talking with parents, and listening to them, and dealing with the minor crises and unexpected demands of an exhibit open to young children (The Children's Museum 1988).

The paragraph above describes the level and role of staffing that the exhibit developers planned for PlaySpace. While this description may not seem out of the ordinary for a children's museum or a daycare center, it presents a number of challenges for an exhibition traveling to museums that do not have exhibits or programs for young children. At a minimum, a full time PlaySpace coordinator and two to four part time assistants are required to staff the space six or seven days a week. The coordinator must have time built into his/her schedule for planning and developing the

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The Association of Youth Museums (AYM) is a professional service organization that endeavors to enhance the quality, expand the capacity, and further the vision of youth museums. Founded as the American Association of Youth Museums in 1962 as a support group for directors, AYM has broadened its services and purposes as an international association. Membership is primarily youth museums, but includes traditional museums with an interest in both child and family audiences, individuals and corporate members.

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Psychology offers a multilayered museum experience inviting active participation from visitors of all ages.



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daily activities, scheduling staff, taking inventory and replenishing consumables, etc. A number of the museums on the tour had to hire a coordinator and/or assistants because no one on staff had the requisite training and experience in child development.

As an aside, it should be said that Psychology as a whole is a heavily staffed exhibition. Staffing requirements are detailed in the contract that each museum signs with ASTC. Several areas of the exhibition may not be open to the public unless staff members are present. One of these areas is PlaySpace. The other area requiring staff is the Discovery & Browsing Area: a quiet, enclosed space where visitors may check out hands-on, table-top activity units or browse through books and periodicals in a small reference library. This area can be staffed by one person (usually a volunteer) at quiet times; three at busy times. In addition, most museums have one or two interpreters roaming the larger exhibition to assist visitors and answer questions.

Well trained staff members (whether paid or volunteer) are especially important to this exhibition for a number of reasons. First, very few science museums have exhibits (other than ones on perception) about psychological research. Science museums may have biologists, physicists or geologists on staff, but very few employ any research psychologists. Thus there is no depth of content expertise in psychology in most science museums. In addition, any treatment of psychology necessarily raises issues of a sensitive nature regarding mental health and illness. These issues are better handled when there are human beings present to mediate and answer questions.

For these reasons APA has found it essential to provide clear staffing guidelines and to provide training for all who will work in the exhibition, whether paid or volunteer. In the case of PlaySpace, finding a highly qualified person to serve as coordinator is essential. Once the coordinator is on board, APA provides funding to send him/her to The Children's Museum in Boston for several days of training with Jeri Robinson and her staff in the original PlaySpace. In some cases, the person hired as coordinator has had a great deal of daycare or classroom experience, but has not worked in the "fishbowl" atmosphere of PlaySpace. The Children's Museum staff emphasize the flexibility required to work with both children and adults at the same time, while being part of a living exhibit that models developmental psychology in action.

APA provides further training by sending Maria Arnillas, who served as PlaySpace coordinator when the exhibition debuted at the Smithsonian, to work with the coordinator and assistants a few days before the exhibition opens at each site. Ms. Arnillas helps the new coordinator set up the space and provides about eight hours

of training on managing the space, on the respective roles of coordinator and assistants, and on working with visitors. She has developed a series of case studies based on experiences at previous sites, and organizes her training around these real life situations.

Comments in the visitor logs from PlaySpace at each of the sites are testimony to the value of high standards for staffing and training. However, providing well qualified staff in adequate numbers can be very expensive. If a museum believes in the importance of appropriate staffing for its children's spaces, it may be able to work out less costly solutions, e.g. collaborating with colleges and universities whereby students earning degrees in child development can earn credit by working in children's exhibits. The experience in PlaySpace provides a kind of national laboratory for developing workable training and staffing patterns.

At some sites, PlaySpace has also served another training function. It has been used as a focus for workshops for daycare providers, teachers and parents. Actual training sessions are usually held in classrooms away from the exhibition area. However, workshop participants can be given observation assignments in PlaySpace. Local colleges and universities often send students of child development to observe the parents and children in PlaySpace, or to interview PlaySpace staff.

Institutional Impact

A long-range goal of the Psychology Exhibition project has been to create, in the words of Caryl Marsh, "a permanent presence for psychology" in science museums across the country. Of all of the components in the exhibition PlaySpace has had perhaps the most lasting effect on the museums on the tour.

Of the eight museums that have hosted the exhibition to date, four already had spaces for small children. Each of the managers of these four permanent spaces has reported making changes resulting from what they observed in PlaySpace. They have added more books and resources for parents and more activities for infants and toddlers, using sand, water and other hands-on, low tech materials that introduce basic science concepts and emphasize fine and gross motor skills.

One of the host museums without a children's space, the Exploratorium in San Francisco, decided to create a permanent children's area as a direct result of the success of PlaySpace. The new exhibit, called PlayBase, is modeled on PlaySpace but also includes additional activities based on science exhibits at the Exploratorium adapted to children under four. The Exploratorium was able to get funding to support the new exhibit by documenting PlaySpace attendance and recording the many favorable comments of members and other visitors in the PlaySpace Visitor Log.

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Conclusion

PlaySpace can be viewed as a constantly changing workshop on human curiosity, providing as it does for multiple layers of discovery: the children explore through the activities and materials; their adult companions may play with the children, observe them at play, talk with other parents and staff, read materials in the resource binder; and visitors outside the space watch the children and adults within.

Because it is usually filled with active and playful children and adults, PlaySpace provides a visually inviting centerpiece for the exhibition. Like a magnet, the exhibit attracts adults with young children immediately, and also draws visitors of all ages to its parameters to observe child development in action. The developmental exhibits in general, and PlaySpace in particular, provide for museums a vivid and engaging model of the ways in which developmental research can be communicated to the general public and can be applied to principles of exhibit design, staffing, training and public programming.

Gretchen Jennings is the director of the Traveling Psychology Exhibition Project at the American Psychological Association. From 1988 to 1993, she directed the development of educational materials, training and public programs for the exhibition. From 1978 to 1988 she held various posts in education and administration at the Smithsonian Institution.

PSYCHOLOGY: UNDERSTANDING OURSELVES, UNDERSTANDING EACH OTHER

- Museum of Science, Boston
February 7–April 28
- Museum of Natural History, Cincinnati
June–August
- Oregon Museum of Science and Industry, Portland
October–December

The tour continues in 1996. In 1997, the exhibition will begin a five-year stay at the Arizona Science Center in Phoenix.

A twenty-nine minute videotape that gives a comprehensive overview of the exhibition is available for purchase from the American Psychological Association. Call (800) 374-2721 for details.

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The color photos published in this reprint have been substituted for the 1995 issue's original images, which are no longer available.