



**Museum Visitor Studies, Evaluation & Audience Research**

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**Audience Research:  
Understanding Visitors and Their  
Experiences at Please Touch Museum  
at Memorial Hall**

**VOLUME 1: REPORT**

*Prepared for the*  
**Please Touch Museum  
Philadelphia, PA**

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# EXECUTIVE SUMMARY

## INTRODUCTION

Please Touch Museum (PTM) contracted with Randi Korn & Associates, Inc. (RK&A) to study its visitors' Museum experiences and perceptions of the Museum. The following summary highlights findings that RK&A, through conversations with PTM staff, identified as relevant to the Museum's strategic priorities. Findings are presented in five thematic sections—Visitor Characteristics, Whole Museum Experience, Exhibition Experiences, Adult Visitors' Perceptions of Play and Learning, and Adults' Role in their Children's Play. Each thematic section (except for Visitor Characteristics) triangulates data produced by four methodologies employed in the study—409 standardized questionnaires, in-depth interviews (73 exit interviews and 42 Centennial exhibition interviews), 168 timing and tracking observations, and two focused observations. Please refer to the body of the report for more detailed findings, including the demographic and visitation characteristics of visitors who were observed or who participated in in-depth interviews.

**The findings presented here are among the most salient. Please read the body of the report for a more comprehensive presentation of findings.**

## VISITOR CHARACTERISTICS<sup>1</sup>

**PTM's drop-in audience is largely homogenous. Racial/ethnic diversity is close to representative of the greater Philadelphia region / the Delaware Valley.<sup>2</sup>**

- ◆ Visitors are primarily female (70 percent);
- ◆ Three-quarters of visitors are between 25 and 44 years old (75 percent);
- ◆ Visitors are highly educated (77 percent graduated college);
- ◆ Almost three-quarters of visitors identify themselves as Caucasian/White (73 percent); some identify themselves as African-American/Black (15 percent);
- ◆ Most visitors are the parents of the children with whom they are visiting (79 percent);
- ◆ Most visitors bring children under 5 years of age to PTM (89 percent were visiting with at least one child in that age range); one-third bring children between 6 and 12 years (33 percent were visiting with at least one child in that age range); and,
- ◆ More than one-half of visitors are PTM members (57 percent).

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<sup>1</sup> These demographic and visit characteristics are from questionnaire data.

<sup>2</sup> According to the 2000 census, 71 percent of Delaware Valley residents are Caucasian/White and 22 percent are African-American/Black (U.S. Census Bureau, 2000).

## WHOLE MUSEUM EXPERIENCE

This section presents key findings that highlight visitors' whole museum experience at PTM. Key findings are divided into two prominent themes that arose from the data.

### VISITORS' PERCEPTIONS OF THE OVERALL MUSEUM

**PTM successfully provides a safe and clean environment and achieves high customer satisfaction.**

- ◆ On a scale from 1 (“Poor”) to 7 (“Excellent”), questionnaire respondents highly rated the “safety of exhibits,” “overall quality of your experience with exhibits,” and “maintenance of the building” (mean = 6.6, each). “Availability of exhibits” and “maintenance of exhibits” are rated slightly lower (mean = 6.4, each).
- ◆ Questionnaire respondents rated the whole museum experience on a scale from 1 (“Uninviting”) to 7 (“Welcoming”) and from 1 (“Difficult to [navigate]”) to 7 (“Easy to [navigate]”); most rated the Museum as “welcoming” (mean = 6.7) and “easy to [navigate]” (mean = 6.5).
- ◆ Questionnaire respondents gave highest praise to the variety of experiences and the “hands-on” nature of PTM. They gave lowest praise to worn or broken exhibits.
- ◆ Many exit interviewees said they most enjoyed being in a place where their children could be on their own, where they did not have to worry or say “no.”
- ◆ Two-thirds of exit interviewees said they most value PTM because it is fun, unique, and/or hands-on.

### VISITOR-STAFF INTERACTIONS

**PTM successfully ensures that front-line and gallery staff deliver high levels of daily customer service; however, the incidence of visitor-staff interaction in exhibitions is low and tends to be instructional rather than playful in nature.**

- ◆ Questionnaire respondents rated their staff experiences on a scale from 1 (“Poor”) to 7 (“Excellent”). “Courtesy of staff upon entering the Museum” and “courtesy of staff in the galleries” were rated highest (mean = 6.5, each); “staff’s ability to interact with me and my children” was rated lower (mean = 6.2).
- ◆ Observations showed that about one-quarter of children or their accompanying caregiver interacted with staff (26 percent); most interactions focused on how to use an exhibit and occurred in Flight Fantasy (80 percent) where staff is required for certain exhibits.
- ◆ Observations showed that when children or their accompanying adult interact with staff, they spend more time in exhibitions than those who do not (11 min., 51 sec. versus 5 min., 23 sec.).
- ◆ Focused observations in the *Nature’s Pond* toddler area showed that staff rarely interacted with visitors; the few visitor-staff interactions were disciplinary in nature.

## EXHIBITION EXPERIENCE

This section presents key findings that highlight visitors' exhibition experiences at PTM. Key findings are divided into five prominent themes that arose from the data.



## VISITORS' SELF-REPORTED EXHIBIT PREFERENCES

**Adult visitors reported enjoying a wide range of exhibits, and, in general, preferred exhibit experiences that are active, hands-on, and encourage pretend play.**

- ◆ Questionnaire respondents highly praised the Shoprite (grocery store), Water Works exhibition area (17 percent each), and the Roadside Attractions exhibition (11 percent).
- ◆ Many exit interviewees said their children enjoyed the Shoprite (grocery store) exhibition because it is hands-on and allows them to pretend they are adults.
- ◆ Many exit interviewees said their children enjoyed Roadside Attractions or Water Works primarily because they are active, interactive, and movement-oriented.
- ◆ Many exit interviewees said they most enjoyed watching their children play and interact with the exhibit elements, or playing with their children in the Museum.

## VISITORS' USE OF EXHIBITS

**PTM's exhibits provide learning opportunities through play as evidenced by the high rate at which children used exhibits as intended; nevertheless, some exhibits were frequently misused, indicating a likely lack of learning.**

- ◆ Observations showed that nearly all children initiated exhibit use (97 percent).
- ◆ Observations showed that children's median total time in exhibition areas was 5 minutes, 12 seconds; observations also show that children are more likely to stay longer in Flight Fantasy compared with Rainforest Rhythm (8 min., 15 sec. versus 4 min., 15 sec., respectively).
- ◆ Observations showed that children most frequently stopped at the following exhibits (by area): Flight Fantasy—Pedal Boat (62 percent) and Rocket Tunnel (60 percent), Rainforest Rhythm—Vines and Chimes (80 percent) and Elephant Conga (79 percent), Water Works—Tug Boat (65 percent) and Water Jets (54 percent).
- ◆ Observations showed that children most frequently used the following exhibits as intended (by area): Flight Fantasy—Balance Beam (100 percent) and Hamster Wheel (86 percent), Rainforest Rhythm—Reed Organ (97 percent) and Vines and Chimes (93 percent), and Water Works—Wave Makers (67 percent) and Locks (54 percent).<sup>3</sup>
- ◆ Observations showed that children most frequently misused the following exhibits (by area): Flight Fantasy—Flying Machine (41 percent) and Pedal Boat (18 percent), Rainforest Rhythm—Whoopee Cushion Stumps (53 percent) and Canoe (27 percent), and Water Works—Wave Makers (43 percent) and Rapids (40 percent).<sup>4</sup>
- ◆ Observations showed that children are more likely to use exhibits as intended in Flight Fantasy and Rainforest Rhythm and more likely to engage in unintended (though still appropriate<sup>5</sup>) play in Water Works.
- ◆ Observations showed that male children are more likely than female children to use exhibits as intended, but they are also more likely to engage in aggressive play.

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<sup>3</sup> Only exhibits at which 20 or more children stopped are included; percentages are of the children who stopped (see Appendices R-U for a more detailed account of intended use).

<sup>4</sup> Only exhibits at which 20 or more children stopped are included; percentages are of the children who stopped (see Appendices R-U for a more detailed account of exhibit misuse).

<sup>5</sup> In addition to defining an exhibit's intended use, staff defined unintended, appropriate ways that a child might engage with each exhibit. For example, a child might role/pretend play at an exhibit intended to encourage testing/cause-effect. See Appendices R-U for a detailed description of appropriate play at each exhibit and Appendices R-U for the frequency of different types of appropriate play at each exhibit.

## VISITORS' USE OF MUSEUM SIGNAGE

### **Signage was not often a part of visitors' experiences at PTM.**

- ◆ Questionnaire respondents reported that they most often read *Today's Fun* signs (48 percent) and *Value of Play* signs (31 percent).
- ◆ Observations showed that few to no adults stopped at *Value of Play* signs (1 percent) and Morris Column signage (0 percent) in Flight Fantasy, Rainforest Rhythm and Water Works.
- ◆ The majority of exit interviewees said they did not notice *Value of Play* signs or said they noticed them, but were too busy watching their children to read them.
- ◆ Questionnaire data showed that visitors at the Museum with at least one young child (0-5 years) are less likely to read *Memorial Hall Journey* signs than are visitors without young children.
- ◆ Questionnaire data showed that first-time visitors are more likely to read *Memorial Hall Journey* signs than are repeat visitors.

## VISITORS' EXPERIENCES WITH SUPPLEMENTAL EXHIBITS

### **Findings show that visitors' experiences with toy collections, works of art, and the historic building varied, with some having no awareness of these elements and others fully appreciating them.**

- ◆ Observations showed that one-third of adult visitors (33 percent) and a small portion of children (18 percent) stopped at toy collections; observations also show that children are more likely to stop at toy collections on their own in Rainforest Rhythm.
- ◆ Observations showed that one-fifth of accompanying adults looked at or discussed toy collections with their child (20 percent).
- ◆ Exit interviewees fell evenly along a spectrum with regard to the role toy collections played in their visit; experiences ranged from not noticing toy collections to engaging with toy collections and discussing the collection's personal, historic, or nostalgic value with their children.
- ◆ Exit interviewees fell evenly along a spectrum with regard to the role works of art played in their visit; experiences ranged from not noticing works of art to appreciating that the works of art were sensory-rich, inspiring, or adult-oriented.
- ◆ Exit interviewees fell evenly along a spectrum with regard to the role Memorial Hall played in their visit; responses ranged from "it's nice" to acknowledging Memorial Hall's historic and architectural significance or beauty.

## VISITORS' EXPERIENCES IN THE CENTENNIAL EXHIBITION

### **Most adult visitors understood that the exhibition is about the history of the building and learned something about the Centennial World's Fair; additionally, many of these visitors said the exhibition is for adults, not children.**

- ◆ About three-quarters of interviewees said the exhibition's main message is about the history of the building, Philadelphia, transportation, or history in general.
- ◆ Almost three-quarters of interviewees said they learned something new about the Centennial, including that the Centennial took place, the large scope of the Centennial, and specific details such as the layout of the Centennial and the buildings that were constructed.
- ◆ More than one-half of interviewees said they believed that the exhibition was for adults because of its focus on history and its lack of "hands-on" experiences.

- ♦ Interviewees said they most enjoyed exhibits that conveyed new information (e.g., the exhibit on food at the Fair), and some specifically appreciated the model because it was visually appealing.
- ♦ Three-quarters of interviewees responded positively to the idea of teaching history to children; some said that hands-on and multisensory activities are good vehicles for teaching history to children, and some said the content should be basic and straightforward, but not “dumbed-down.”

## ADULT VISITORS' PERCEPTIONS OF PLAY AND LEARNING

**Most visitors primarily value PTM as a place for their children to have unique, fun experiences. Findings also show that about one-half of visitors associate play at PTM with the development of specific skills and abilities in their children, such as experimentation and imagination. A small portion of visitors explicitly associate play with education.**

- ♦ Questionnaire respondents most frequently ranked the following two statements as accurate descriptors of what they value about play at PTM: “provides opportunities for the children I’m with to have fun” and “enhances the imagination of the children I’m with.”
- ♦ Questionnaire respondents least frequently ranked the following two statements as accurate descriptors of what they value about play at PTM: “provides opportunities for the children I’m with to be active and burn energy” and “contributes to the academic achievement of the children I’m with.”
- ♦ Almost one-half of exit interviewees described play as something that builds skills or abilities like imagination, creativity, experimentation, or decision-making; slightly less than one-fifth explicitly associated play with learning or education.
- ♦ When asked what their children gained from their time at PTM, two-thirds of exit interviewees said their children gained a “unique,” “enriching,” or “fun” experience or practiced skills like imagination, creativity, experimentation, or decision-making. Slightly less than one-fifth explicitly used words like “education” or “learning” to describe what their children gained.

## ADULTS' ROLE IN THEIR CHILDREN'S PLAY

**Findings on the role of the adult in their children’s play are mixed. Many adults perceived their role as facilitating and actively playing alongside their children; however, observations indicate that adults more often provided an instructional or supervisory role than a playful, collaborative one.**

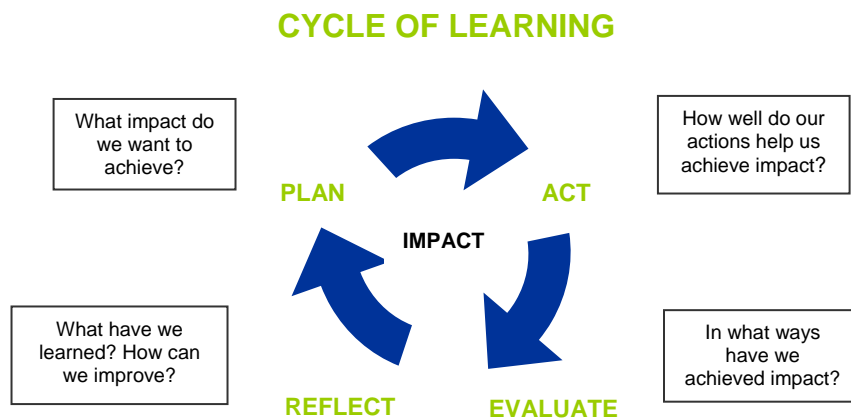
- ♦ Questionnaire respondents most frequently ranked the following two statements as accurate descriptors of their role at the Museum: “play and have fun alongside the children I am with” and “allow the children I’m with to direct/guide activities and play.”
- ♦ Questionnaire respondents least frequently ranked the following two statements as accurate descriptors of their role at the Museum: “give the children I’m with the freedom to play without adult intervention” and “learn alongside the children I’m with.”
- ♦ Observations showed that one-third of adults provided their child with information or instruction (39 percent), played with their child (37 percent), and/or modeled how to use an exhibit (35 percent). A small portion of adults got down on their child’s level (8 percent) and/or engaged in playful behavior (7 percent).

- ◆ About one-third of exit interviewees described their role in their children's play as primarily interactive and playful.
- ◆ Focused observations in the toddler area showed that several adults redirected their children to other exhibits when an older child (4 and older) began using an exhibit and their younger child was in danger of being pushed.

# DISCUSSION

## INTRODUCTION

This study produced an impressive amount of information about Please Touch Museum (PTM) visitors and their experiences. We urge staff to mine the report for details, as there are many interesting findings about visitors' experiences. However, we deliberately focus this discussion on findings that will help staff address its biggest challenges. To help PTM staff reflect on key findings, RK&A has developed four discussion questions that arose from our analysis of the data, knowledge of PTM, synthesis of the Reflection Workshop conducted with staff on January 19, 2010, and broad experience with institutions nationally. A guiding principal of this discussion is the Cycle of Learning (shown below), which depicts an ideal work cycle in museums with four interconnected and continual steps that are guided by four related questions.



## DISCUSSION

### **How can PTM increase recognition among adult visitors of the value of play as a lifelong learning activity?**

PTM strives to “enrich the lives of children by creating learning opportunities through play” that are open-ended, child-driven, and process-oriented. PTM’s emphasis on the link between play and learning is similar to that of many children’s museums across the country. In fact, the mission of the Association of Children’s Museums is “to build the capacity of children’s museums to serve as town squares where play inspires creativity and lifelong learning” (Association of Children’s Museums, 2010). This emphasis on play and learning takes place in the context of two movements. First, research shows the importance of play for developing knowledge and skills such as literacy and language development, creative problem-solving, abstract thinking, and social negotiation (Ginsburg, 2007; Oliver and Klugman, 2002; Tsao, 2002). Second, experts in the field of pediatrics and child development are calling attention to the slow deterioration of play opportunities due in part to parents over-scheduling their children, fewer safe places to play, poverty-related disparities, and an emphasis on gauging academic readiness through standardized testing (Miller and Almon, 2008; Ginsburg, 2007; Isenberg, 2002). Children’s museums are well positioned to address these barriers, as they offer families of diverse backgrounds safe environments to spend time together. They also operate outside the constraints placed in formal

education environments such as the focus on narrowly measuring children’s achievement to prove teacher effectiveness and receive continued funding.

In the context of these important issues, this study examined the perceptions of PTM’s adult visitors with regard to play and learning. Findings suggest a discernible perception gap between the play beliefs of children’s museum professionals and adult visitors to PTM. Questionnaire respondents most frequently ranked the statement “provides opportunities for the children I’m with to have fun”<sup>6</sup> as an accurate descriptor of what they value about play at PTM and least frequently ranked the statement “contributes to the academic achievement of the children I’m with” as an accurate descriptor of what they value about play at PTM. While these findings did not surprise staff, they underscore the differences between what parents and PTM staff see as the value of play. Of course, PTM sees the value of play as an enjoyable activity for children; in fact, it is this enjoyment, or intrinsic motivation, that makes play such an effective way for children to learn (Ginsburg, 2007). However, staff also wants parents to recognize the value of play for preparing children to be successful lifelong learners.

Interestingly, interviews with adult visitors reveal more nuanced perceptions with regard to play and point to an opportunity to help parents see the strong links between play and learning. For instance, one-half of adult interviewees talked about play in the context of skills and abilities, especially socialization and imagination (but did not explicitly associate these skills with learning). Though most interviewees’ descriptions of play were not highly sophisticated, they demonstrate an understanding that play contributes to children’s growth, and suggest that these adults are ripe to receive the message that play at PTM contributes to children’s lifelong learning.

One way that PTM has chosen to communicate its message about play and learning is through signage designed for adults. This signage, called *Value of Play*, is displayed in various exhibition areas throughout the Museum. Even though the signage is designed to quickly convey its message about the value of play, findings show that it plays little to no role in visitors’ experiences at PTM. Observations show that few to no adults stopped at *Value of Play* signs (1 percent). In interviews, some visitors admitted noticing the signs, but, not surprisingly, explained that they were too busy watching their children to read them. These findings indicate that PTM will need to explore communication strategies other than signage.

### **How can the Museum help adult visitors understand the importance of their role in supporting children’s play at PTM?**

Helping adult visitors recognize the value of play is only half the battle; PTM must also help parents build the awareness, knowledge, and skills necessary to effectively play with their child. Many experts agree that there is a continuum of play experiences, ranging from completely unstructured play to highly structured, adult-led play (Miller and Almon, 2008; Department for Children, Schools, and Families, UK, 2009). The general consensus is that a combination of play experiences in the middle of the continuum—play experiences that are child-initiated and actively supported by adults and play experiences that are facilitated (not dictated) by adults—is most beneficial to children. In other words, children need the freedom to initiate play and explore on their own while being supported by adults who understand and abide by the rules of play; and, at the same time, children need adults, who know them intimately, to introduce new play experiences that will stimulate growth (Miller and Almon, 2008).

As such, PTM desires to provide experiences that foster adult-child interaction in the exhibits. Given the importance of the adult in the quality of children’s play experiences, this study looked carefully at the

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<sup>6</sup> Notably there were no differences between members and non-members when it came to perceptions about play.

role of adults in children’s exhibit experiences. Findings suggest a gap between parents’ perceptions of their role in their children’s play at PTM and how they actually play with them. Questionnaire respondents most frequently ranked the statement “play and have fun alongside the children I am with” as an accurate descriptor of their role at the Museum. However, during observations, most adult-child interactions were supervisory or instructional in nature—only one-third of adults actually played with their children and very few engaged in playful behavior or got down on their child’s level to play. Many possible explanations can be offered for this gap in perception and practice. Perhaps parents lack the confidence, knowledge, or skills to facilitate play for their children and are looking for guidance; perhaps parents’ perception of playful interaction is different from the Museum’s (i.e., parents may think that allowing their child to do as they please while they observe from afar qualifies as interaction); or, perhaps parents neither see the value of playful interaction nor are aware of how to facilitate play and lack the motivation or energy to do so. The nuances of this perception gap would be an interesting area for further study.

Overall, findings suggest that PTM’s adult visitors see value in participating in their children’s play, but may not be aware of or entirely comfortable with how to enter into children’s play. This finding validates some of PTM’s previous observations and ideas about parents’ engagement in children’s play. Further it also validates PTM’s plan and current steps to “train all front-line staff in play engagement, play techniques and the importance of play,” as quoted from PTM’s strategic plan. This strategy is currently in its formative stage and, as such, it is not surprising that findings from the observations and questionnaire show that staff rarely engaged in playful interactions with visitors. Moving forward with this strategy could potentially be very effective; nevertheless, the Museum recognizes that it must balance staff interaction with giving families adequate privacy and space.

### **How can PTM use collections to create opportunities for intergenerational connections?**

Few children’s museums have collections, and thus PTM is uniquely poised to lead the way in using collections in an innovative way. One goal of PTM’s strategic plan is to “expand existing collection of post-1945 toys and other childhood objects, which complement PTM’s mission to provide learning opportunities through play, while creating opportunities for intergenerational connections through programs with collections.” Currently, PTM primarily displays its collections in glass cases throughout the exhibits; many of the displayed toys are from time periods when adult visitors were children. Findings from this study show that adult visitors’ experiences with toy collections varied relatively evenly along a continuum. Some adults did not notice the toy displays, others noticed and reflected personally on the meaning of the toys, and others had the experience PTM intends, which is a conversation between adults and children about the toys. It is not completely surprising that a portion of adults did not notice the toy displays since the Museum is a vibrant, active space with a variety of opportunities available at any one time. Notably, data points to one possible strategy for increasing the visibility of the toy collections—observations show that children are more likely to stop at toy collections on their own in Rainforest Rhythm, which probably can be attributed to the toys being displayed at child-level in that exhibit. To help those adults who notice and appreciate the toys to begin to converse with their child companions about the toys, PTM may need to provide explicit cues or display the toys in a way that is more likely to trigger conversation.

### **How can PTM optimize the Centennial exhibition experience?**

PTM staff expressed an interest in understanding visitors’ perceptions of the historical significance of the new building and the exhibition devoted to the 1876 World’s Fair. Findings show that history does

not play largely into the visitor experience—Memorial Hall’s historic significance was neither top of mind for visitors nor cited as a reason to visit the Museum. In exit interviews, when asked about the building, one-quarter of interviewees acknowledged the building’s historical significance.

Findings from interviews with visitors to the Centennial exhibition are more promising. These interviews demonstrated that most adults understood that the exhibition is about the history of the building and said they learned something new about the Centennial World’s Fair. However, more than one-half of interviewees believed that the exhibition was for adults. To appeal to children, the Centennial exhibition would likely need many revisions to look and feel more like the rest of the Museum. Nevertheless, this challenge represents an opportunity, as many adults responded positively to the idea of teaching history to children.

## RECOMMENDATIONS

- ◆ Continue to reflect on the evaluation findings in the context of the strategic plan.
- ◆ Use the Cycle of Learning in department meetings to reflect on various questions raised as a result of the evaluation.
- ◆ As suggested in the Reflection Workshop, form an evaluation team of staff from across departments to take responsibility for continuing to reflect and act on the evaluation results of this study.
- ◆ Be intentional in planning all museum experiences. For instance, as suggested in the Reflection Workshop, define what staff members mean by an “ideal” admission experience.
- ◆ To more fully explore the nuances of parents’ perceptions and practices of play, consider conducting more research to answer the following questions: 1) what does it mean to parents to “play with” their children? 2) Do parents and the Museum define play and learning in similar ways? 3) Are there play opportunities at PTM that parents believe have more learning potential than others? These are among the questions needed to demystify parents’ perceptions of play at PTM.
- ◆ As a staff, set explicit goals for staff interaction, both in regard to what it should include (instructional versus playful versus hands-off) and how much is an ideal amount. Communicate these goals with all staff.
- ◆ Continue with plans to train floor staff in “playful engagement,” while recognizing the need to balance being available to families while not being intrusive. Use formative evaluation to test strategies for staff interaction.
- ◆ Set explicit goals about collections on display in regard to their purpose and communicate these goals with all staff. To encourage more intergenerational discussions about the toys, try (and evaluate) different strategies to trigger visitor conversations.
- ◆ Consider communicating the information in the *Value of Play* signage through other means that will be more likely to attract and hold the attention of adults. For instance, integrate the information directly onto exhibits (in other words, since a great portion of adult-child interaction is instructional, consider communicating the *Value of Play* information as a form of instructions). Or consider bringing the *Value of Play* signage to life using staff (one suggestion in the Reflection Workshop was to use the admission experience to introduce the connection of play and learning)



- ♦ Moving forward, with any new exhibit design, consider ways to design exhibits that will most effectively encourage adult-child interaction.

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# INTRODUCTION

Please Touch Museum contracted with Randi Korn & Associates, Inc. to study their visitors' experiences and perceptions of play in the context of the Museum and its strategic priorities. Four methodologies were employed to study visitors—standardized questionnaires, in-depth interviews, timing and tracking observations, and focused observations. Methodologies were selected to provide PTM with a broad picture of visitors' entire Museum experience, as well as visitors' experiences with specific exhibitions of interest to staff. PTM's interest further extends to their adult visitors' perceptions of play in the context of the Museum; thus, each methodology also explored this idea to provide staff with a holistic picture of visitors' perceptions of play.

Specifically, the study's objectives are to explore:

- ◆ Visitors' demographic and visit characteristics;
- ◆ Visitors' whole museum experience, including the quality of the family's experience with PTM's offerings and services, what visitors value about PTM, and adults visitors' perceptions of their children's learning;
- ◆ Visitors' specific exhibition experiences, including time spent and group behaviors exhibited in Water Works, Rainforest Rhythm, Flight Fantasy, Explorer's Base Camp, as well as visitors' experiences in and perceptions of the Centennial exhibition;
- ◆ Adult visitors' perceptions of play and its role in their children's learning;
- ◆ Adult visitors' perceptions of their role in their children's play and learning; and,
- ◆ How PTM staff can best use evaluation findings to address the strategic priorities of the Museum.

## METHODOLOGY AND DATA ANALYSIS

RK&A selected four methodologies to capture visitors' experiences at PTM: standardized questionnaires, in-depth interviews, timing and tracking observations, and focused observations. These methodologies produce quantitative and qualitative data. Below is a detailed description of each methodology and the approach used to analyze resulting data.

### STANDARDIZED QUESTIONNAIRES

#### *METHOD*

Questionnaires were used because they collect standardized information from a large sample of visitors. Further, questionnaire data can be compared using various statistical analyses. For this study, standardized questionnaires were used to collect data about visitors' experiences at the Museum, values, and demographics.

Questionnaires were administered to visitors exiting PTM. Specially-trained data collectors conducted face-to-face interviews with visitors using the questionnaire as the interview framework. That is, the first three pages of the questionnaire were administered using the questionnaire as an interview guide (i.e., data collectors asked each question aloud), and the visitor completed the fourth page on his/her own (see Appendix A).

Visitors were selected using a continuous random sampling method. In keeping with this method, data collectors intercepted adult visitors (18 years or older and visiting with children younger than 18) and asked them to participate.<sup>7</sup> If the visitor declined, the data collector logged the visitor's gender, estimated age, description of the visit group, and reason for refusal. If the visitor agreed, the data collector conducted a face-to-face interview to administer the questionnaire. PTM provided toys for children to play with while the adult visitor was interviewed. PTM also provided occasional staff assistance; staff played with/supervised children so that the adult visitor could focus on the interview. A small gift/toy was presented to each child to thank adults for participating in the study.

### **DATA ANALYSIS**

Questionnaires produce quantitative data. Data were analyzed using SPSS 12.0.1 for Windows, a statistical package for personal computers. Analyses included descriptive and inferential methods. See Appendix B for a listing of all statistical analyses.

Frequency distributions were calculated for all categorical variables. Summary statistics, including the mean (average) and standard deviation (spread of scores: “±” in tables), were calculated for rating scale variables.

To examine the relationship between two categorical variables, cross-tabulation tables were computed to show the joint frequency distribution of the variables, and the chi-square statistic ( $X^2$ ) was used to test the significance of the relationship. For example, “season” was tested against “age group” to determine whether the two variables are related.

To test for differences in the mean *ratings* of two or more groups, an analysis of variance (ANOVA) was performed and the F-statistic was used to test the significance of the difference. For example, rating scale scores were compared by “age group” to determine whether ratings are age-related.

To test for differences in the mean *ranks* of two or more groups, both an analysis of variance (ANOVA) and the nonparametric Kruskal-Wallis (K-W) test was performed and the F- or H-statistic was used to test the significance of the difference.<sup>8</sup> For example, ranks were compared by “age group” to determine whether mean ranks were age-related. RK&A reported the results produced by the ANOVA because, while the two procedures indicate the same significant factors, the presentation of ANOVAS is easier to interpret.

For all statistical tests, a 0.01 level of significance was used to preclude findings of little practical significance.<sup>9</sup> Only statistically significant findings are presented in the body of the report.

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<sup>7</sup> Data collectors positioned themselves near Roadside Attractions and the information/ticket desks. They conducted the interviews at nearby round tables in Hamilton Hall.

<sup>8</sup> The Kruskal-Wallis (K-W) test is a nonparametric statistical method for testing the equality of population medians of two or more groups. Nonparametric statistical methods do not assume that the underlying distribution of a variable is “normal” with a symmetric bell-shape, so they are appropriate for testing variables with asymmetric distributions such as “total time in the exhibition.” The K-W test is analogous to a One-way Analysis of Variance, with the scores replaced by their ranks. The K-W test statistic  $H$  has approximately a chi-square distribution.

<sup>9</sup> When the level of significance is set to  $p = 0.01$ , any finding that exists at a probability ( $p$ -value)  $\leq 0.01$  is “significant.” When a finding (such as a relationship between two variables or a difference in rating scores) has a  $p$ -value of 0.01, there is a 99 percent probability that the finding exists; that is, in 99 out of 100 cases, the finding is correct. Conversely, there is a 1 percent probability that the finding would not exist; in other words, in 1 out of 100 cases, the finding appears by chance.

## EXIT INTERVIEWS

### METHOD

RK&A used exit interviews to collect data about visitors' experiences at PTM. Interviews capture visitors' thoughts, feelings, and attitudes and compliment questionnaires since they capture the language visitors use to discuss their experiences.

RK&A trained data collectors to intercept visitors (18 years and older visiting with children younger than 18) as they exited PTM. Data collectors followed a continuous random sampling method to select participants.<sup>10</sup> If the visitor declined, the data collector logged the visitor's gender, estimated age, description of the visit group, and reason for refusal. If the visitor agreed, the interview was conducted using a standardized interview guide (see Appendix C). Standardization was important as some of the interview data were scored with a rubric and analyzed quantitatively. All interviews were audio-recorded with interviewees' permission and transcribed to facilitate analysis. At the end of each interview, the interviewee completed a one-page information form that captured demographic and visit information (see Appendix D).

PTM provided toys for children to play with while the adult visitor was interviewed. PTM also provided occasional staff assistance; staff played with/supervised children so that the adult visitor could focus on the interview. A small gift/toy was presented to each child to thank adults for participating in the study.

### DATA ANALYSIS

Exit interviews produce qualitative data, meaning that results are descriptive following from the interviews' conversational nature. When analyzing qualitative data, the evaluator studies verbatim transcripts for meaningful patterns, and, as patterns emerge, groups similar responses, eliciting trends in the data. Data analyzed qualitatively includes what visitors liked most and least as well as suggestions for PTM.

Data from exit interviews were *also* analyzed quantitatively through the development of a scoring rubric. A scoring rubric is a set of criteria linked to objectives for learning, perceptions and/or experiences; rubrics are used to assess performance of knowledge, skills, etc. on a continuum. In this study, the scoring rubric describes, on a continuum, adult visitors' self-reported experiences with exhibits and signage as well as perceptions of PTM's value, visit outcomes for children, the adult role at the Museum, and play. Scoring rubrics are useful because they capture the nuances of visitors' experiences quantitatively, allowing outcomes to be measured. By doing so, RK&A can test independent variables, such as gender, against rubric scores to search for statistically significant relationships.

The scoring rubric includes a continuum of experiences and perceptions on a scale from 1 ("below beginning") to 4 ("highly developed") (see Appendix E for the Scoring Rubric). RK&A used information gathered from PTM staff, programs and exhibitions, and an early analysis of data from exit interviews (the language visitors used to talk about PTM) to develop the rubric.

After developing the rubric, verbatim transcripts were scored on the 4-point scale described above for eight visitor objectives. To avoid bias, a data collector who had not conducted the interviews scored interviews using the rubric. Data, including rubric scores and interviewees' demographic information, were analyzed using SPSS 12.0.1 for Windows. All statistical analyses run are listed in Appendix F.

Descriptive statistical analyses included frequency distributions for all variables and summary statistics, such as the mean (average) and standard deviation (spread of scores: "±" in tables), for the rubric rating-scale variables and age.

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<sup>10</sup> Refer to method in the questionnaire section.

To examine the relationship between two categorical variables, cross-tabulation tables were computed to show the joint frequency distribution of the variables, and the chi-square statistic ( $X^2$ ) was used to test the significance of the relationship. For example, “percent of visitors who scored at the below beginning level for objective 1” was tested against “gender” to determine whether the two variables are related.

All statistical tests employed a two-tailed 0.01 level of significance to preclude findings of little practical significance. Only statistically significant findings are presented in the body of the report.

## **TIMING AND TRACKING OBSERVATIONS**

### **METHOD**

Timing and tracking observations provide an objective and quantitative account of how visitors behave and react to exhibition components. Observational data indicate how much time visitors spend in an exhibition and identify the range of visitor behaviors.

RK&A conducted timing and tracking observations between August and October 2009. Children ages 3 to 10 were eligible to be unobtrusively observed in one of three exhibition areas—Flight Fantasy, Rainforest Rhythm, and Water Works—identified by PTM staff as areas of interest. The data collector selected visitors to observe using a continuous random sampling method. In accordance with this method, the data collector imagined a line outside the exhibition and selected the first eligible visitor to cross this imaginary line for observation. Once the visitor entered the exhibition, the data collector started her stopwatch and followed the selected visitor through the exhibition, recording the exhibits used, noting select behaviors (e.g., misuse), and logging total time spent in the exhibition (see Appendices G-I for the observation forms). When the visitor completed his or her visit, the data collector intercepted the accompanying caregiver and captured demographic and visit information. Then, the data collector returned to the entrance to await the next eligible visitor to cross the imaginary line.

### **DATA ANALYSIS**

Timing and tracking observation data are quantitative and were analyzed using SPSS 12.0.1 for Windows. Analyses included both descriptive and inferential methods. All statistical analyses run are listed in Appendix J.

Frequency distributions were calculated for all variables. Summary statistics were also calculated for time variables. Summary statistics include the range, median (50<sup>th</sup> percentile, the data point at which half the responses fall above and half fall below)<sup>11</sup>, mean (average), and standard deviation (spread of scores: “±” in tables).

To examine the relationship between two categorical variables, cross-tabulation tables were computed to show the joint frequency distribution of the variables, and the chi-square statistic ( $X^2$ ) was used to test the significance of the relationship. For example, “stop at exhibit” was tested against “age group” to determine whether exhibit stops were age-related.

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<sup>11</sup> Medians rather than means are reported for interval data because, as is typical, the number of exhibits used and the time spent by visitors were distributed unevenly across the range. For example, whereas most visitors spent a short to moderate amount of time in the exhibition, a few spent an unusually long time. When the distribution of scores is extremely asymmetrical (i.e., “lopsided”), the mean is affected by the extreme scores and, consequently, falls further away from the distribution’s central area. In such cases, the median is a better indicator of the distribution’s central area because it is not sensitive to the values of scores above and below it—only to the number of such scores.

To test for differences in the medians of two or more groups, the nonparametric Kruskal-Wallis (K-W) test was performed.<sup>12</sup> For example, “total time in the exhibition” was compared by “age group” to determine whether time spent in the exhibition was age-related.

Statistical tests employed a 0.01 level of significance to preclude findings of little practical significance. Only statistically significant findings are presented in the body of the report.

## **FOCUSED OBSERVATIONS**

### **METHOD**

To capture visitors’ experiences in PTM’s toddler areas (which were not included in the timing and tracking observations), RK&A conducted two focused observations lasting two hours each of *Nature’s Pond*, one of three toddler areas in PTM. During focused observations, the observer watches as visitors use exhibits, writes a detailed description of what children did, how they interacted with other children and their caregivers, and, when possible, records dialogue. In addition to exhibited behaviors, the observer also notes children’s genders, approximate ages, and group number and composition (when possible).

### **DATA ANALYSIS**

Focused observations produce qualitative data, meaning that results are descriptive. When analyzing qualitative data, the evaluator studies descriptions for meaningful patterns and, as patterns and trends emerge, groups similar responses or behaviors.

## **CENTENNIAL INTERVIEWS**

### **METHOD**

In-depth interviews were used to collect data about visitors’ experiences in the Centennial exhibition. In-depth interviews are useful for understanding ideas and concepts from a visitor’s point of view because they encourage and motivate visitors to describe their experiences, express their opinions and feelings, and share with the interviewer the meaning they construct from an experience.

Using a continuous random sampling method, RK&A-trained data collectors intercepted adult visitors (18 years or older and visiting with children under 18) as they exited the Centennial exhibition, and asked them to participate in an interview. If the visitor declined, the data collector logged the visitor’s gender, estimated age, description of the visit group, and reason for refusal. If the visitor agreed, the interview was conducted. The interview guide was intentionally open-ended to allow interviewees the freedom to discuss what they felt was meaningful (see Appendix K). All interviews were audio-recorded with interviewees’ permission and transcribed to facilitate analysis. PTM provided toys for children to play with while the adult visitor was interviewed. A small gift/toy was presented to each child to thank adults for participating in the study.

### **DATA ANALYSIS**

In-depth interviews produce qualitative data. When analyzing qualitative data, the evaluator studies data for meaningful patterns and, as patterns and trends emerge, groups similar responses or self-reported behaviors.

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<sup>12</sup> The Kruskal-Wallis (K-W) test is a nonparametric statistical method for testing the equality of population medians of two or more groups. Nonparametric statistical methods do not assume that the underlying distribution of a variable is “normal” with a symmetric bell-shape, so they are appropriate for testing variables with asymmetric distributions such as “total time in the exhibition.” The K-W test is analogous to a One-way Analysis of Variance, with the scores replaced by their ranks. The K-W test statistic  $H$  has approximately a chi-square distribution.

## REPORTING

### QUANTITATIVE DATA

This report presents quantitative data in tables and figures. Percentages within tables may not always equal 100 owing to rounding. Findings within each topic are presented in descending order, starting with the most-frequently occurring.

### QUALITATIVE DATA

Trends and themes within the data are presented in thematic sections, and, within each section, findings are reported in descending order starting with the most-frequently occurring.

This report uses verbatim quotations from interviews (edited for clarity) to give the reader the flavor of interviewees' experiences, and to illustrate their ideas as fully as possible. Within quotations, the interviewer's comments appear in parentheses. Gender and age of interviewees appear in brackets following the quotations.

#### **SECTIONS OF THE REPORT:**

1. Standardized Questionnaires
2. Exit Interviews
3. Timing and Tracking Observations
4. Focused Observations
5. Centennial Interviews

# PRINCIPAL FINDINGS: STANDARDIZED QUESTIONNAIRES

## INTRODUCTION

This section of the report presents the findings from a questionnaire administered to adult visitors<sup>13</sup> at PTM between August and October 2009. Data collectors intercepted eligible<sup>14</sup> visitors as they were leaving PTM and administered the survey interview-style. Data collectors intercepted 964 visitors and invited them to participate. A total of 409<sup>15</sup> visitors agreed and 555 declined, for a participation rate of 42 percent.

## VALIDITY OF THE SAMPLE

Sampling is critical when collecting data that will be analyzed statistically because the reliability of the statistical analyses depends on surveying a *representative* sample of PTM's adult visitors. While the research design makes efforts to ensure a representative sample<sup>16</sup>, the validity of the sample is ultimately determined by comparing the demographics and characteristics of visitors who agreed to participate in the study (respondents) with visitors who refused to participate in the study (refusals).

RK&A compared PTM questionnaire respondents and refusals by gender, age, and description of visit group (e.g., number of children, ages of children, and number of adults). There are a few statistically significant differences between respondents and refusals (tables displaying the information below are in Appendix L):

- ♦ Young adult visitors (18-34 years) are more likely to decline participation in the study than are middle-aged visitors (35-54 years) and older visitors (55 years or older).
- ♦ Visitors with three or more children are more likely to decline participation in the study than are visitors with one or two children.
- ♦ Visitors with at least one older child (6-12 years) are more likely to agree to participate in the study than are visitors without at least one older child.
- ♦ Visitors with at least one other adult in their visit group are more likely to agree to participate in the study than are visitors visiting without another adult.

Thus, because the sample is not truly representative, readers should keep these differences in mind while considering the findings presented.

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<sup>13</sup> Throughout this section of the report, the term "visitor" will be used to describe "adult visitors."

<sup>14</sup> Questionnaires were administered to visitors who: (1) were 18 years or older; (2) spoke English; (3) were visiting PTM with children under the age of 18; and, (4) were selected using a continuous random selection method.

<sup>15</sup> Before analysis, two surveys were removed from the 409 collected since those visitors were not visiting with children.

<sup>16</sup> To combat sampling issues, PTM provided toys for the children to play with during the interview. Also, PTM occasionally provided staff to entertain/watch the children during the interview



## DATA COLLECTION CONDITIONS

About one-half of questionnaires were administered during the summer (August 22-September 2), and one-half during the fall (October 1-October 17) (49 percent and 51 percent, respectively) (see Table 1). Fifty-nine percent of questionnaires were administered during weekdays, 38 percent were administered during weekend days, and 3 percent were administered on Target First Wednesdays.<sup>17</sup> During data collection, crowding in the Museum was generally moderate to high<sup>18</sup> (83 percent).

**TABLE 1**  
**DATA COLLECTION CONDITIONS**

<b>SEASON (n = 407)</b>	<b>%</b>
Summer	49
Fall	51
<b>DAY (n = 406)</b>	<b>%</b>
Weekday	59
Weekend day	38
Target First Wednesday	3
<b>DAILY ATTENDANCE (CROWDING) (n = 406)</b>	<b>%</b>
Low	17
Moderate	38
High	45

<sup>1</sup>Daily attendance during data collection: range = 450 - 4181 visitors; median = 1546 visitors; mean = 1685.1 visitors.

### VISITOR CHARACTERISTICS ASSOCIATED WITH SEASONS

RK&A tested whether visitors differed by season and day of the week. There is one seasonal difference:

- ♦ Visitors at PTM with at least one older child (6-12 years) are more likely to visit PTM during the summer than in the fall (see Table 2).

**TABLE 2**  
**VISITING WITH AT LEAST ONE OLDER CHILD (6-12 YEARS) BY SEASON**

<b>VISITING WITH AT LEAST ONE OLDER CHILD (6-12 YEARS)<sup>1</sup> (n = 407)</b>	<b>SEASON</b>		
	<b>SUMMER</b>	<b>FALL</b>	<b>TOTAL</b>
	<b>%</b>	<b>%</b>	<b>%</b>
Yes	40	26	33

<sup>1</sup> $\chi^2 = 8.319$ ;  $df = 1$ ;  $p = .004$

<sup>17</sup> Target First Wednesdays are hosted on the first Wednesday of each month. PTM is open for free from 5-7pm on these nights and offers special programs. Questionnaires were administered at the Target First Wednesdays held on September 2 and October 7.

<sup>18</sup> Low attendance is defined as fewer than 1,000 visitors, moderate attendance as between 1,000 and 1,800 visitors, and high attendance as more than 1,800 visitors.

## DEMOGRAPHIC CHARACTERISTICS AND BACKGROUND INFORMATION

Respondents are primarily female (70 percent), Caucasian (73 percent), and highly educated (77 percent had graduated college) (see Table 3). Three-quarters of respondents are between 25 and 44 years old (75 percent), and respondents' mean age is 39.

**TABLE 3**  
**DEMOGRAPHIC CHARACTERISTICS**

<b>GENDER (n = 406)</b>	<b>%</b>
Female	70
Male	30
<b>AGE<sup>1</sup> ( IN YEARS, n = 405)</b>	<b>%<sup>2</sup></b>
18 – 24	5
25 – 34	30
35 – 44	44
45 – 54	12
55 – 64	6
65 or older	4
<b>EDUCATION (n = 406)</b>	<b>%<sup>2</sup></b>
Some high school	1
High school degree	8
Technical education	2
Some college/Associate's degree	13
College graduate/Bachelor's degree	35
Some graduate work	5
Graduate/professional degree	37
<b>ETHNICITY (n = 404)</b>	<b>%<sup>3</sup></b>
Caucasian/White	73
African-American/Black	15
Asian	7
Hispanic	5
Other <sup>4</sup>	3

<sup>1</sup>Age: range = 18 – 76; median age = 37; mean age = 38.8 (± 10.63 years)

<sup>2</sup>Percentages do not total 100 owing to rounding.

<sup>3</sup>Percentages do not total 100 because visitors could identify more than one group.

<sup>4</sup>Other: Not identified, n = 7; British/Indian, n = 1; Iranian, n = 1; Middle Eastern, n = 1; Native American, n = 1; Nigerian, n = 1.

## RESIDENCE

Not surprisingly, more than three-quarters of respondents live in the Delaware Valley (79 percent)—the metropolitan area surrounding Philadelphia, which encompasses parts of Pennsylvania, New Jersey, Delaware, and Maryland (see Table 4). Of respondents who live in the Delaware Valley, the greatest percentage live in Philadelphia County/City, followed by Montgomery County and Delaware County. See Appendix M for a list of respondents' zip codes organized by state.

**TABLE 4**  
**RESIDENCE**

<b>STATE OF RESIDENCE (n = 402)</b>	<b>%</b>
Pennsylvania	70
New Jersey	13
Other State <sup>1</sup>	9
Maryland	3
Delaware	3
New York	3
Virginia	1
Massachusetts	1
Connecticut	1
California	1
Florida	1
<b>COUNTY OF RESIDENCE (FOR RESIDENTS OF THE DELAWARE VALLEY) (n = 316)</b>	<b>%</b>
Philadelphia County/City (Pennsylvania)	39
Montgomery County (Pennsylvania)	19
Delaware County (Pennsylvania)	17
Bucks County (Pennsylvania)	5
Chester County (Pennsylvania)	4
Burlington County (New Jersey)	4
Camden County (New Jersey)	4
New Castle County (Delaware)	4
Cumberland County (New Jersey)	1
Berks County (Pennsylvania)	1
Cecil County (Maryland)	1
Gloucester County (New Jersey)	1
Salem County (New Jersey)	0

<sup>1</sup>Other state: District of Columbia, n = 2; Mississippi, n = 1; North Carolina, n = 1; Arizona, n = 1; Ohio, n = 1; Minnesota, n = 1; Oklahoma, n = 1; New Mexico, n = 1.

## VISIT CHARACTERISTICS

This section describes visit characteristics including details of the visit group (whom the respondent was visiting with and their relationship to the children), PTM visit history (how many times they had visited PTM at its former and new site), PTM membership, and visit reason.

### DESCRIPTION OF VISIT GROUP

Approximately two-thirds of respondents were visiting with at least one other adult (64 percent), and most were visiting PTM with one or two children (85 percent) (see Table 5). Most respondents were visiting PTM with at least one younger child (0-5 years) (89 percent).

**TABLE 5**  
**DESCRIPTION OF VISIT GROUP**

<b>NUMBER OF ADULTS IN VISIT GROUP (NOT INCLUDING THE RESPONDENT) (<i>n</i> = 390)</b>	<b>%<sup>1</sup></b>
None	36
One	41
Two	15
Three or more	9
<b>NUMBER OF CHILDREN IN VISIT GROUP (<i>n</i> = 406)</b>	<b>%</b>
One	48
Two	37
Three	10
Four or more	5
<b>AGES OF CHILDREN IN VISIT GROUP (<i>n</i> = 406)</b>	<b>%<sup>2</sup></b>
Visiting with at least one child 0-5 years	89
Visiting with at least one child 6-12 years	33
Visiting with at least one child 13-17 years	2

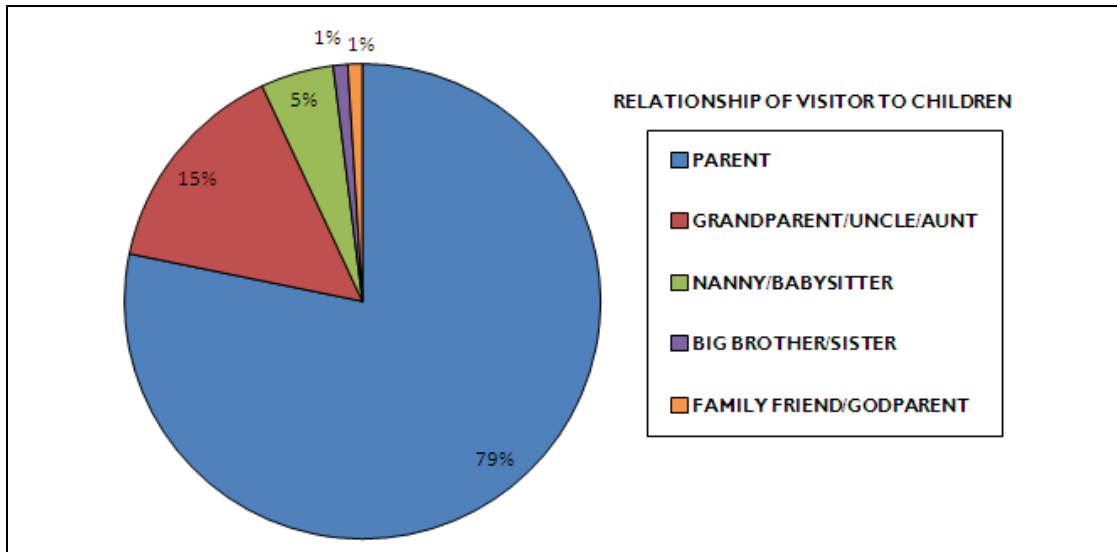
<sup>1</sup>Percentages do not total 100 owing to rounding.

<sup>2</sup>Percentages do not total 100 because visitors could be visiting with children in multiple age groups.

Respondents were asked to identify their relationship to the children with whom they were visiting. Most respondents are the parents of the children with whom they were visiting (74 percent) (see Figure 1). Other respondents identified themselves as a grandparent/uncle/aunt (15 percent), nanny/babysitter (5 percent), big brother/sister (1 percent), and family friend/godparent (1 percent).

**FIGURE 1**

**RELATIONSHIP OF VISITOR TO THE CHILDREN WITH WHOM THEY WERE VISITING**



<sup>1</sup>n = 382

<sup>2</sup>Percentages do not total 100 owing to rounding.

**PTM VISIT HISTORY**

More than one-half of respondents were repeat visitors to PTM (55 percent) (see Table 6). When asked how frequently they visited PTM’s new site (Fairmount Park) and how frequently they visited the former site (21<sup>st</sup> Street), more visitors reported repeatedly visiting PTM at its new site (Fairmount Park) (85 percent) compared with its former site (21<sup>st</sup> Street) (63 percent). Further, of those who reported visiting the new site more than once, most reported frequent visits, with 22 percent saying they had visited PTM 11 or more times.

**TABLE 6**  
**PTM VISIT HISTORY**

<b>FIRST-TIME OR REPEAT VISITOR TO PTM (n = 406)</b>	<b>%</b>
Repeat visitor	55
First-time visitor	45
<b>IF A REPEAT VISITOR... NOT INCLUDING TODAY, HOW MANY TIMES HAVE YOU VISITED PTM AT THIS SITE (FAIRMOUNT PARK)? (n = 224)</b>	
	<b>%<sup>1</sup></b>
Never	15
Once	12
2 – 3 times	20
4 – 6 times	22
7 – 10 times	11
11 or more times	22
<b>IF A REPEAT VISITOR... NOT INCLUDING TODAY, HOW MANY TIMES HAVE YOU VISITED PTM AT 21<sup>ST</sup> STREET? (n = 223)</b>	
	<b>%</b>
Never	37
Once	20
2 – 3 times	21
4 – 6 times	8
7 – 10 times	6
11 or more times	8

<sup>1</sup>Percentages do not total 100 owing to rounding.

Forty-three percent of respondents are members of PTM, suggesting that most repeat visitors are members (see Table 7). Not surprisingly, there is a strong correlation between PTM membership and repeat visitation; most repeat visitors are PTM members (88 percent) (see Table 8).

**TABLE 7**  
**PTM MEMBERSHIP**

<b>PTM MEMBERSHIP (n = 405)</b>	<b>%</b>
Yes	43
No	57

**TABLE 8****FIRST-TIME OR REPEAT VISITOR BY PTM MEMBERSHIP**

FIRST-TIME OR REPEAT VISITOR <sup>1</sup> (n = 392)	PTM MEMBERSHIP		
	YES	NO	TOTAL
	%	%	%
First-time visitor	12	69	45
Repeat visitor	88	31	55

<sup>1</sup> $\chi^2 = 130.531$ ;  $df = 1$ ;  $p = .000$

**VISITOR CHARACTERISTICS ASSOCIATED WITH PTM MEMBERSHIP**

Members were compared to non-members by gender, age, and description of visit group. There are a couple significant differences:

- ♦ Visitors with at least one younger child (0-5 years) are more likely to be PTM members than are those visiting without at least one younger child (see Table 9).
- ♦ Visitors visiting without another adult are more likely to be a PTM member than are those visiting with another adult (see Table 10).

**TABLE 9****PTM MEMBERSHIP BY VISITING WITH AT LEAST ONE YOUNGER CHILD (0-5 YEARS)**

PTM MEMBERSHIP <sup>1</sup> (n = 405)	VISITING WITH AT LEAST ONE YOUNGER CHILD (0-5 YEARS)		
	YES	NO	TOTAL
	%	%	%
Yes	45	21	43
No	55	80	57

<sup>1</sup> $\chi^2 = 9.997$ ;  $df = 1$ ;  $p = .002$

**TABLE 10****PTM MEMBERSHIP BY VISITING WITH ANOTHER ADULT**

PTM MEMBERSHIP <sup>1</sup> (n = 388)	VISITING WITH ANOTHER ADULT		
	YES	NO	TOTAL
	%	%	%
Yes	34	58	43
No	66	42	57

<sup>1</sup> $\chi^2 = 21.230$ ;  $df = 1$ ;  $p = .000$

## VISIT REASON

Respondents were asked to identify their “primary” reason for visiting PTM that day, although respondents sometimes gave more than one reason; all responses were recorded. Most respondents said they were visiting PTM because it offered something for their children to do (83 percent) (see Table 11). Supplemental reasons include inclement weather (9 percent) and visiting from out of town (7 percent).

**TABLE 11**

**VISIT REASON**

<b>VISIT REASON (n = 405)</b>	<b>%<sup>1</sup></b>
Something for children to do (e.g., entertainment, play, education)	83
Inclement weather	9
Visiting from out of town	7
Other <sup>2</sup>	5
See the new museum	4
Celebrating a birthday	3
Never been here before/curious	2
Recommendation from family or friend	2
Discount/free entry/guest passes	2
See the building (e.g., architecture, history)	1
Attend a specific program/performance	1
In the park/live nearby	1

<sup>1</sup>Respondents often reported more than one reason for visiting PTM, thus, percentages total more than 100 percent.

<sup>2</sup>Other: miscellaneous response, n = 10; day off, n = 4; saw advertisements, n = 2; local vacation, n = 2; saw PTM on *Jon & Kate Plus 8*, n = 2.

## EXPERIENCES AT THE MUSEUM

This section of the report focuses on respondents’ experiences at PTM on the day they were surveyed.

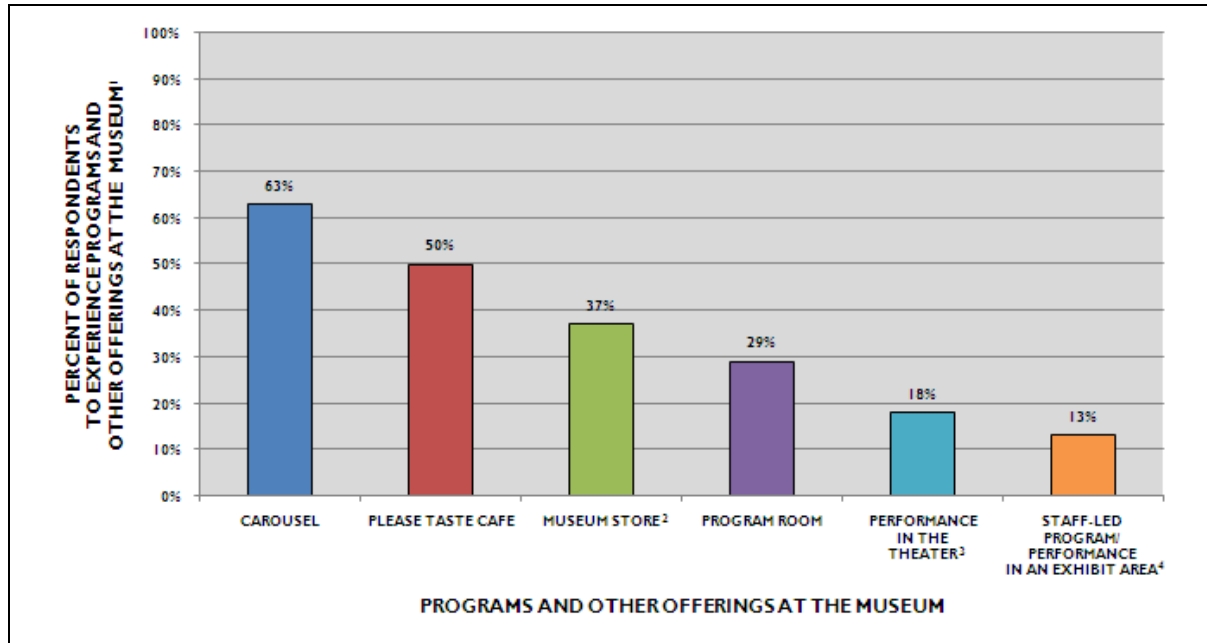
### PROGRAMS AND OTHER OFFERINGS AT THE MUSEUM

PTM presents a variety of programs and other offerings each day. Respondents were asked whether they had experienced a select list of programs and other offerings. The two most frequently mentioned offerings were the carousel (63 percent) and the Please Taste Café (50 percent) (see Figure 2). The two least frequently mentioned offerings were performances in the theater (18 percent) and staff-led program/performance in an exhibit area (13 percent); keep in mind, however, that these offerings are most restricted by time and availability (i.e., programs and performances take place at certain times and the size of the theater restricts capacity).



**FIGURE 2**

**ATTENDANCE OF PROGRAMS AND OTHER OFFERINGS AT PTM**



<sup>1</sup>Percentages do not total 100 because respondents could have experienced multiple offerings.

<sup>2</sup>Note that of the respondents who reported experiencing the museum store, only 62 respondents had visited the store at the time of the questionnaire, while 90 planned to visit the store after completing the questionnaire.

<sup>3</sup>Performance in the theater: Sea to Sky, *n* = 43; Fly Fishing, *n* = 14; Drum Show, *n* = 3.

<sup>4</sup>Staff-led program/performance in an exhibit area: Dance Party, *n* = 1; Puppet, *n* = 5; Magic, *n* = 3; Kooky, *n* = 3; Storytime, *n* = 2; Drumcircle, *n* = 1.

Respondents who experienced select programs and other offerings were asked to rank their experiences with each on a scale from 1 (“Not a valuable experience”) to 7 (“Very valuable experience”). The mean rating for the carousel was 6.3, and the mean rating for the program room was 5.8 (see Table 12).

**TABLE 12**

**RATINGS OF SELECT PROGRAMS AND OFFERINGS AT PTM**

RATINGS OF SELECT PROGRAMS AND OFFERINGS AT PTM	<i>n</i>	MEAN	±
Carousel	260	6.3	1.05
Program room	116	5.8	1.38

Please note that visitors also rated their experiences with specific performances in the theater and staff-led programs/performances in exhibit areas. However, there were not enough individual ratings to analyze these results statistically; rather, the frequency of these ratings is listed in Appendix N.

**VISITOR CHARACTERISTICS ASSOCIATED WITH PROGRAMS AND OTHER OFFERINGS AT PTM**

Attendance to programs and other offerings was compared by gender, age, description of visit group, and first-time/repeat visitor.<sup>19</sup> There are a couple significant differences:

- ♦ Visitors at PTM with another adult are more likely to visit the museum store than are those visiting without another adult (see Table 13).
- ♦ First-time visitors are more likely to visit the museum store than are repeat visitors (see Table 14).

**TABLE 13**

**PROGRAMS AND OTHER OFFERINGS BY VISITING WITH ANOTHER ADULT**

PROGRAMS AND OTHER OFFERINGS	VISITING WITH ANOTHER ADULT			TOTAL
	YES	NO	TOTAL	
	<i>n</i>	%	%	%
Museum store <sup>1</sup>	386	46	25	39

<sup>1</sup> $\chi^2 = 16.509$ ;  $df = 1$ ;  $p = .000$

**TABLE 14**

**PROGRAMS AND OTHER OFFERINGS BY FIRST-TIME VISITOR**

PROGRAMS AND OTHER OFFERINGS	FIRST-TIME VISITOR			TOTAL
	YES	NO	TOTAL	
	<i>n</i>	%	%	%
Museum store <sup>1</sup>	401	49	29	38

<sup>1</sup> $\chi^2 = 16.890$ ;  $df = 1$ ;  $p = .000$

<sup>19</sup> Membership and residence are closely correlated to first-time/repeat visitation so it was not necessary to include it in our comparisons.

## EXPERIENCES WITH STAFF

Respondents rated their experiences with staff at PTM on their visit day on a scale from 1 (“Poor”) to 7 (“Excellent”). The highest rated experiences with staff include the “courtesy of staff upon entering the Museum” and the “courtesy of the staff in the galleries” (mean = 6.5) (see Table 15). The lowest two ratings include “staff’s ability to interact with me and my children” and “courtesy of museum store staff” (mean = 6.2).

**TABLE 15**

### RATINGS OF EXPERIENCES WITH STAFF

<b>7-POINT SCALE: POOR (1) / EXCELLENT (7)</b>	<b><i>n</i></b>	<b>MEAN</b>	<b>±</b>
Courtesy of staff upon entering the Museum	407	6.5	0.86
Courtesy of staff in the galleries	405	6.5	0.80
Courtesy of café staff	200	6.4	0.87
Availability of staff to assist in the galleries	407	6.3	0.90
Staff’s ability to interact with me and my children	403	6.2	1.10
Courtesy of museum store staff	62	6.2	1.01

### VISITOR CHARACTERISTICS ASSOCIATED WITH RATINGS OF EXPERIENCES WITH STAFF

Ratings of experiences with staff were compared by gender, age, description of visit group, and first-time/repeat visitor. There are no statistically significant differences.

## EXPERIENCES WITH THE BUILDING/FACILITIES

Respondents rated their experiences in the building/facilities on a scale from 1 (“Poor”) to 7 (“Excellent”). Overall, ratings were high. The highest rated experiences were the “safety of exhibits,” “overall quality of your experience with exhibits,” and “maintenance of the building” (mean = 6.6) (see Table 16). The lowest two ratings include “availability of exhibits” and “maintenance of exhibits” (mean = 6.4).

**TABLE 16**

### RATINGS OF EXPERIENCES WITH THE BUILDING/FACILITIES

<b>7-POINT SCALE: POOR (1) / EXCELLENT (7)</b>	<b><i>n</i></b>	<b>MEAN</b>	<b>±</b>
Safety of exhibits	406	6.6	0.68
Overall quality of your experience with exhibits	405	6.6	0.68
Maintenance of the building (e.g., cleanliness)	407	6.6	0.66
Availability of exhibits (did you have to wait to use exhibits?)	407	6.4	0.88
Maintenance of exhibits	407	6.4	0.82

### VISITOR CHARACTERISTICS ASSOCIATED WITH RATINGS OF EXPERIENCES WITH THE BUILDING/FACILITIES

Ratings of experiences in the building/facilities were compared by gender, age, description of visit group, and first-time/repeat visitor. There are no statistically significant differences.

## OTHER EXPERIENCES AT THE MUSEUM TODAY

Respondents rated their experiences at PTM today on three different 7-point scales. The ratings were positive overall with visitors finding PTM “welcoming” (mean = 6.7), “well worth the cost of visit” (mean = 6.6), and “easy to [navigate]” (mean = 6.5) (see Table 17).

**TABLE 17**  
**RATINGS OF OTHER EXPERIENCES AT PTM TODAY**

7-POINT RATING SCALES	<i>n</i>	MEAN	±
Uninviting (1)/Welcoming (7)	406	6.7	0.62
Not worth the cost of visit (1)/Well worth the cost of visit (7)	403	6.6	1.10
Difficult to find my way around (1)/Easy to find my way around (7)	407	6.5	0.87

### VISITOR CHARACTERISTICS ASSOCIATED WITH RATINGS OF OTHER EXPERIENCES AT PTM TODAY

Ratings of other experiences at PTM were compared by gender, age, description of visit group, and first-time/repeat visitor. There are a couple significant differences:

- ♦ Visitors at PTM with at least one younger child (0-5 years) are more likely to rate their experiences higher on the scale from 1 (“Not worth the cost of visit”) to 7 (“Well worth the cost of visit”) than are those visiting without younger children (see Table 18).
- ♦ Repeat visitors are more likely to rate their experiences higher on the scale from 1 (“Not worth the cost of visit”) to 7 (“Well worth the cost of visit”) than are first-time visitors (see Table 19).

**TABLE 18**  
**RATINGS OF EXPERIENCES AT PTM TODAY BY VISITING WITH AT LEAST ONE YOUNGER CHILD (0-5 YEARS)**

7-POINT RATING SCALES ( <i>n</i> = 403)	VISITING WITH AT LEAST ONE YOUNGER CHILD (0-5 YEARS)		
	YES	NO	TOTAL
	MEAN	MEAN	MEAN
Not worth the cost of visit (1)/Well worth the cost of visit (7) <sup>1</sup>	6.45	5.91	6.39

<sup>1</sup>F = 9.679; *df* = 1; *p* = .002

**TABLE 19**  
**RATINGS OF EXPERIENCES AT PTM TODAY BY FIRST-TIME VISITOR**

7-POINT RATING SCALES ( <i>n</i> = 401)	FIRST-TIME VISITOR		
	YES	NO	TOTAL
	MEAN	MEAN	MEAN
Not worth the cost of visit (1)/Well worth the cost of visit (7) <sup>1</sup>	6.14	6.59	6.39

<sup>1</sup>F = 17.021; *df* = 1; *p* = .000

**EXPERIENCES OF VISITORS' WITH SPECIAL NEEDS CHILDREN**

Respondents were asked, “If your child has special needs, did the Museum accommodate you?” Most respondents said that the question was not applicable to them (88 percent) (see Table 20). The remaining responses were divided, with 6 percent saying that their needs were met and another 6 percent saying their needs were not met.

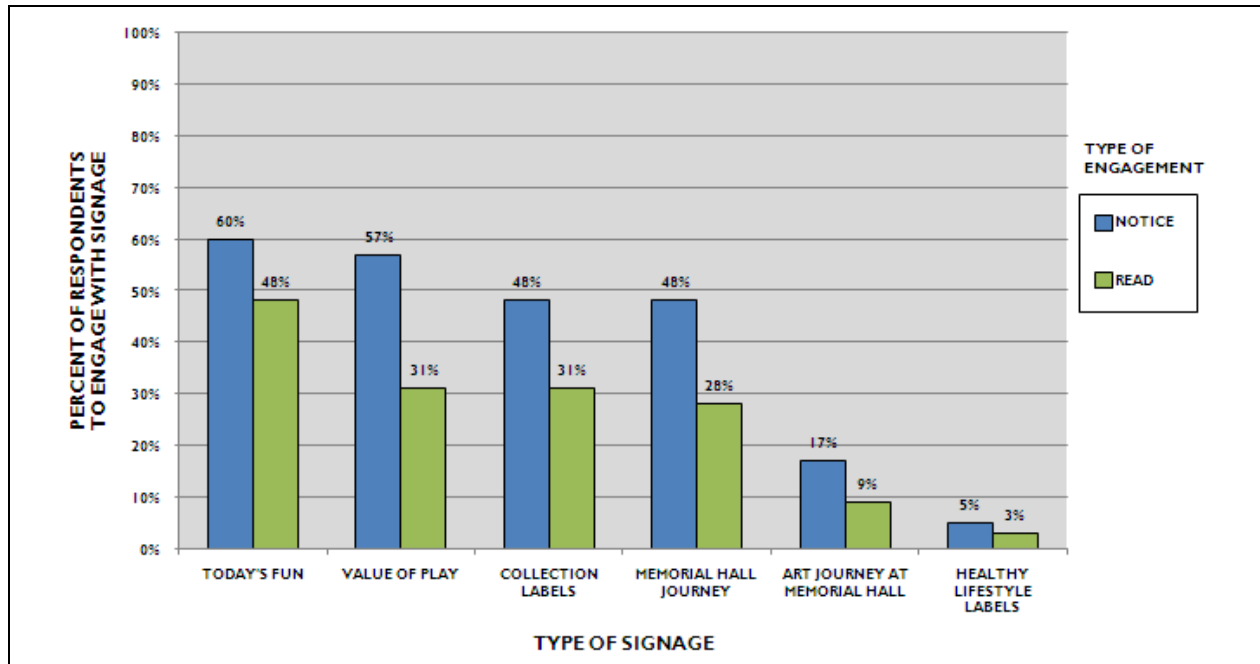
**TABLE 20**  
**ACCOMMODATING SPECIAL NEEDS VISITORS**

IF YOUR CHILD HAS SPECIAL NEEDS, DID THE MUSEUM ACCOMMODATE YOU? (n = 395)	%
Not applicable	88
Yes	6
No	6

**MUSEUM SIGNAGE**

Respondents were asked to look at several images depicting various PTM signage and identify which signage they noticed and read during their visit that day (see Appendix A for depictions of the signage). Visitors most often noticed and read *Today's Fun* signs (60 percent noticed/48 percent read) and *Value of Play* signs (57 percent noticed/31 percent read); the least noticed signage types were *Art Journey at Memorial Hall* signs (17 percent noticed/9 percent read) and *Healthy Lifestyle* labels (5 percent noticed/3 percent read) (see Figure 3).

**FIGURE**  
**ENGAGEMENT WITH PTM SIGNAGE<sup>1</sup>**



<sup>1</sup>Since respondents could notice and read more than one sign, percentages total more than 100.

### VISITOR CHARACTERISTICS ASSOCIATED WITH SIGNAGE

Whether visitors noticed or read the signage was compared by gender, age, description of visit group, and first-time/repeat visitor. There are several significant differences:

- ♦ Females are more likely to notice *Today's Fun* signs, *Value of Play* signs, and collection labels than are males (see Table 21).
- ♦ Visitors at PTM with at least one younger child (0-5 years) are less likely to notice *and* read *Memorial Hall Journey* signs than are visitors without younger children (see Tables 22 and 24).
- ♦ First-time visitors are more likely to notice *Value of Play* signs and *Memorial Hall Journey* signs than are repeat visitors (see Table 23); also, first-time visitors are more likely to read *Memorial Hall Journey* signs than are repeat visitors (see Table 25).

**TABLE 21**  
**NOTICED SIGNAGE BY GENDER**

SIGNAGE (n = 406)	GENDER			
	n	FEMALE	MALE	TOTAL
		%	%	%
<i>Today's Fun</i> <sup>1</sup>	406	65	48	60
<i>Value of Play</i> <sup>2</sup>	406	61	46	57
Collection labels <sup>3</sup>	405	52	38	48

<sup>1</sup> $\chi^2 = 9.753$ ;  $df = 1$ ;  $p = .002$

<sup>2</sup> $\chi^2 = 7.921$ ;  $df = 1$ ;  $p = .005$

<sup>3</sup> $\chi^2 = 7.049$ ;  $df = 1$ ;  $p = .008$

**TABLE 22**  
**NOTICED SIGNAGE BY VISITING WITH AT LEAST ONE YOUNGER CHILD (0-5 YEARS)**

SIGNAGE (n = 407)	VISITING WITH AT LEAST ONE YOUNGER CHILD (0-5 YEARS)		
	YES	NO	TOTAL
	%	%	%
<i>Memorial Hall Journey</i> <sup>1</sup>	45	70	48

<sup>1</sup> $\chi^2 = 10.046$ ;  $df = 1$ ;  $p = .002$

**TABLE 23**  
**NOTICED SIGNAGE BY FIRST-TIME VISITOR**

SIGNAGE (n = 406)	FIRST-TIME VISITOR		
	YES	NO	TOTAL
	%	%	%
<i>Value of Play</i> <sup>1</sup>	64	51	57
<i>Memorial Hall Journey</i> <sup>2</sup>	57	41	48

<sup>1</sup> $\chi^2 = 7.199$ ;  $df = 1$ ;  $p = .007$

<sup>2</sup> $\chi^2 = 10.339$ ;  $df = 1$ ;  $p = .001$

**TABLE 24****READ SIGNAGE BY VISITING WITH AT LEAST ONE YOUNGER CHILD (0-5 YEARS)**

	VISITING WITH AT LEAST ONE YOUNGER CHILD (0-5 YEARS)		
	YES	NO	TOTAL
<b>SIGNAGE (n = 407)</b>	%	%	%
<i>Memorial Hall Journey</i> <sup>1</sup>	26	50	28

<sup>1</sup> $\chi^2 = 11.507$ ;  $df = 1$ ;  $p = .001$

**TABLE 25****READ SIGNAGE BY FIRST-TIME VISITOR**

	FIRST-TIME VISITOR		
	YES	NO	TOTAL
<b>SIGNAGE (n = 406)</b>	%	%	%
<i>Memorial Hall Journey</i> <sup>1</sup>	36	22	28

<sup>1</sup> $\chi^2 = 8.493$ ;  $df = 1$ ;  $p = .004$

**HIGHEST PRAISE**

Respondents were asked to identify aspects of the Museum that they thought should receive the highest praise. This question was open-ended, so responses were coded and categorized. Respondents highly praised a wide range of aspects; an encouraging finding because it suggests that the Museum offers something for everyone.

Respondents gave highest praise to the Shoprite (grocery store) exhibition and the Water Works exhibition area (17 percent each); the Roadside Attractions exhibition (11 percent), the variety of activities and exhibits for children (9 percent), and the interactive and hands-on nature of PTM (9 percent) were also highly praised (see Table 26). Aspects identified by less than 5 percent of respondents are reported in Appendix O.

**TABLE 26**  
**MUSEUM ASPECTS DESERVING HIGHEST PRAISE**

<b>MUSEUM ASPECTS DESERVING HIGHEST PRAISE (n = 409) <sup>1</sup></b>	<b>%<sup>2</sup></b>
Specific exhibit area was engaging—Shoprite (grocery store)	17
Specific exhibit area was engaging—Water Works	17
Specific exhibit area was engaging—Roadside Attractions	11
Variety of activities and exhibits for children (e.g., types of activities and age appropriateness)	9
Interactive/hands-on	9
Specific component was engaging—Carousel	8
Specific exhibit area—Alice in Wonderland	7
General positive feedback about exhibits	7
Beautiful/historic building	6
Maintenance/cleanliness of the exhibits and facility	5
Spacious	5
Performances in the theater and in exhibit areas	5

<sup>1</sup>This table includes only those aspects identified by 5 percent or more of respondents. See Appendix O for a complete list of Museum aspects deserving highest praise.

<sup>2</sup> Percentages do not total 100 because respondents could identify more than one aspect deserving highest praise; further, not all responses are represented in this table.



**LOWEST PRAISE**

Respondents were asked to identify aspects of PTM that they thought should receive the lowest praise. This question was open-ended, so responses were coded and categorized. One-quarter of respondents said there was nothing at PTM that deserved the lowest praise (25 percent) (see Table 27). Otherwise, there was little consensus as to what aspects deserved the lowest praise; less than 10 percent of respondents identified any one aspect, including cost-related items (8 percent), crowding (6 percent), the age appropriateness of exhibits (6 percent), safety (6 percent), worn or broken exhibits (6 percent), and exhibits in general (5 percent). Aspects identified by less than 5 percent of respondents are reported in Appendix O.

**TABLE 27**  
**MUSEUM ASPECTS DESERVING LOWEST PRAISE**

<b>MUSEUM ASPECTS DESERVING LOWEST PRAISE (n = 407)<sup>1</sup></b>	<b>%<sup>2</sup></b>
Nothing (i.e., everything was good)	25
Miscellaneous <sup>3</sup>	9
Cost-related items <sup>4</sup>	8
Crowded/had to wait for exhibits <sup>5</sup>	6
Exhibits are not age-appropriate <sup>6</sup>	6
Did not feel the Museum was as child-safe as it could be <sup>7</sup>	6
Worn or broken exhibits/messy exhibit areas <sup>8</sup>	6
Exhibits in general	5

<sup>1</sup>This table includes only those aspects identified by 5 percent or more of respondents. See Appendix O for a complete list of Museum aspects deserving lowest praise.

<sup>2</sup> Percentages do not total 100 because respondents could identify more than one aspect deserving lowest praise; further, not all responses are represented in this table.

<sup>3</sup>Miscellaneous responses: see Appendix O.

<sup>4</sup>Cost-related items: admission, n = 22; Please Touch Café, n = 4; carousel, n = 2; museum store, n = 1; membership, n = 1; parking, n = 1.

<sup>5</sup>Crowded/had to wait for exhibits: in general, n = 15; at Shoprite (grocery store), n = 5; at Roadside Attractions, n = 3; at Flight Fantasy, n = 1; at Shoe Store, n = 1.

<sup>6</sup>Exhibits not age appropriate: in general, n = 21; at Shoprite (grocery store), n = 1; at Alice in Wonderland, n = 1; at Flight Fantasy, n = 1.

<sup>7</sup>Did not feel PTM was as safe as it could be: unsupervised kids, n = 6; toddler areas not gated, n = 3; lose sight of children in Alice in Wonderland maze, n = 3; exposed outlets, n = 2; no system to make sure that visitors do not take home children they did not arrive with, n = 2; pointy edges on the wall, n = 1; exhibits not padded, n = 1; exhibits too spaced out (hard to watch children), n = 1; the machines in Roadside Attractions, n = 1; sanitary issues in the Shoe Store, n = 1; floors too hard, n = 1; in Waterworks, n = 1.

<sup>8</sup>Worn or broken exhibits/messy exhibit area: in general, n = 11; in Flight Fantasy, n = 9; in Alice in Wonderland, n = 1; in Birds-eye-view component, n = 1; in Shoprite (grocery store), n = 1; in CHOP (hospital), n = 1; in Roadside Attractions, n = 1.

## PERCEPTIONS OF THEIR ROLE AT THE MUSEUM

RK&A asked respondents to rank six statements that describe roles one might play when visiting PTM with children; the statements are as follows (listed in no particular order):

- ♦ Facilitate the play of the children I'm with.
- ♦ Supervise the behavior of the children I'm with.
- ♦ Learn alongside the children I'm with.
- ♦ Play and have fun alongside the children I'm with.
- ♦ Give the children I'm with the freedom to play without adult intervention.
- ♦ Allow the children I'm with to direct/guide activities and play.

To facilitate the ranking, data collectors presented each respondent with six cards—one statement on each card. Data collectors instructed respondents to “physically sort the six statements in order from the statement that most accurately (or best) describes the respondent’s role at the Museum to the statement that least accurately describes the respondent’s role at the Museum.” Respondents were not allowed to give a tie rank to any of the statements (see Appendix A for a picture of the materials presented to respondents).

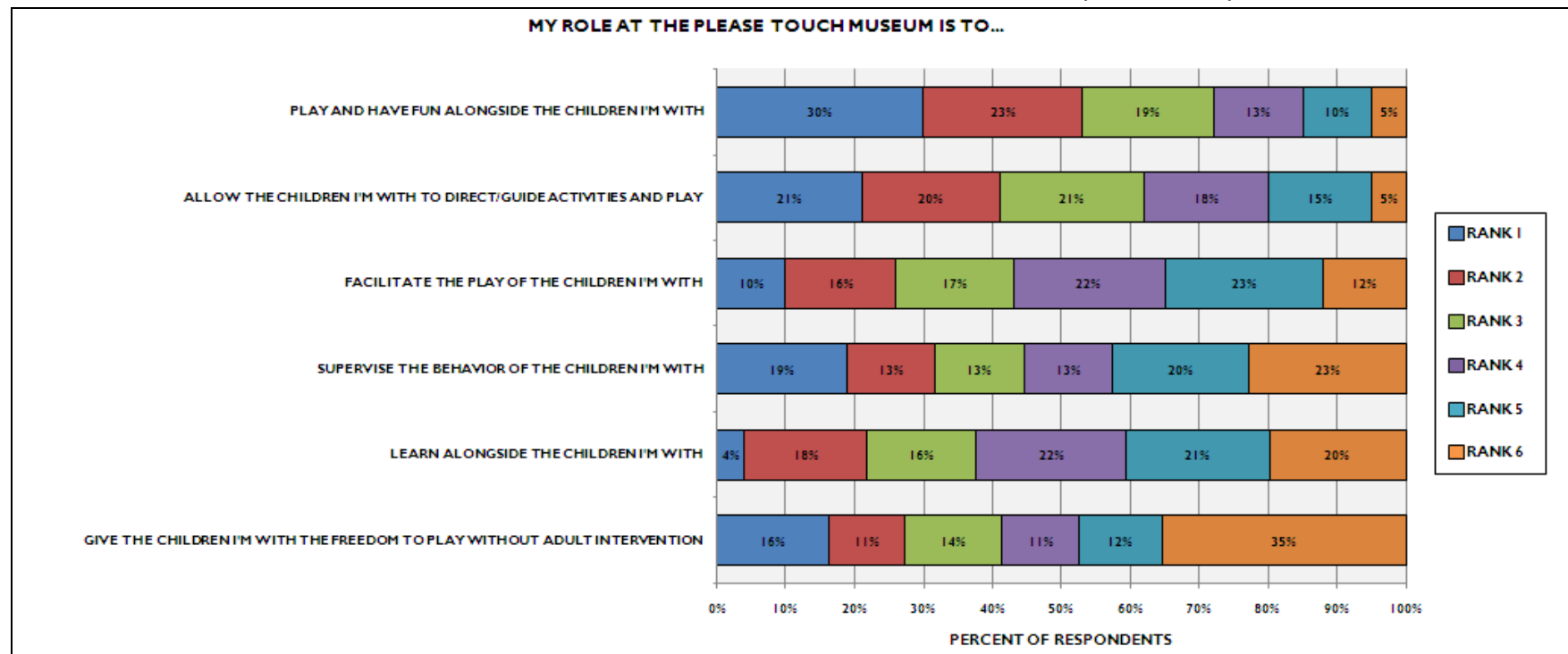
After respondents ordered the cards, data collectors recorded each statement’s rank from “1” to “6,” where “1” indicates the statement that *most* accurately describes a respondent’s role at PTM and “6” indicates the statement that *least* accurately describes a respondent’s role at PTM.

Figure 4 shows the percent of respondents' rankings of "1" to "6" for each statement. Notice that, in the figure, a color is keyed to each rank (see the legend on the right side of the figure). In looking at Figure 4, notice the following:

- ♦ The statement "Play and have fun alongside the visitor I am with" was most frequently ranked "1"; that is, 30 percent of respondents said they thought this statement most accurately describes their role at PTM.
- ♦ The statement "Give the children I'm with the freedom to play without adult intervention" was most frequently ranked "6"; that is, 35 percent of respondents said they thought this statement least accurately describes their role at PTM.
- ♦ The statements "Supervise the behavior of the children I'm with" and "Facilitate the play of the children I'm with" has the most even spread of ranks (no more than 23 percent of respondents and no fewer than 10 percent of respondents agreed on any one ranking). That is, there was the least consensus among respondents regarding these two statements.

**FIGURE**

**RANKS ASSIGNED TO EACH STATEMENT DESCRIBING RESPONDENTS' ROLES AT THE MUSEUM (FREQUENCY)**



## VISITOR CHARACTERISTICS ASSOCIATED WITH THE RANKINGS

The mean rank for each of the six statements was compared by gender, age, description of visit group, and ethnicity. There are several significant differences. (Tables presenting the following data are in Appendix P):

- ♦ Middle-aged and older visitors (35 years and older) are more likely to indicate that the statement “Give the children I’m with the freedom to play without adult intervention” accurately describes their role at PTM than are young adult visitors (ages 18-34).
- ♦ Visitors at PTM *without* young children (0-5 years) are more likely to indicate that the statement “Give the children I’m with the freedom to play without adult intervention” accurately describes their role at PTM than are visitors *with* young children.
- ♦ Non-Caucasian visitors are more likely to indicate that the statement “Learn alongside the children I’m with” accurately describes their role at PTM than are Caucasian visitors.
- ♦ Non-African-American visitors are more likely to indicate that the statement “Facilitate the play of the children I’m with” accurately describes their role at PTM than African-American visitors.
- ♦ African-American visitors are more likely to indicate that the statement “Learn alongside the children I’m with” accurately describes their role at PTM than are non-African American visitors.

## HOW RESPONDENTS VALUE PLAY AT THE MUSEUM

RK&A asked respondents to rank eight statements that describe how one might value play at PTM; the statements are as follows (listed in no particular order):

- ♦ Enhances the imagination of the children I’m with.
- ♦ Provides opportunities for the children I’m with to be active and burn energy.
- ♦ Provides opportunities for the children I’m with to have fun.
- ♦ Enhances the abilities of the children I’m with to solve problems creatively.
- ♦ Contributes to the academic achievement of the children I’m with.
- ♦ Enhances the confidence of the children I’m with.
- ♦ Contributes to the healthy brain development of the children I’m with.
- ♦ Contributes to the social and emotional well being of the children I’m with

To facilitate the ranking, data collectors presented each respondent with eight cards—one statement on each card. Data collectors instructed respondents to separate the eight cards into two piles—four statements that most accurately describe how respondents value play at PTM and four statements that least accurately describe how respondents value play at PTM. Data collectors then asked respondents to order the statements in each pile; respondents were not allowed to give a tie rank to any of the statements (see Appendix A for a picture of the materials presented).

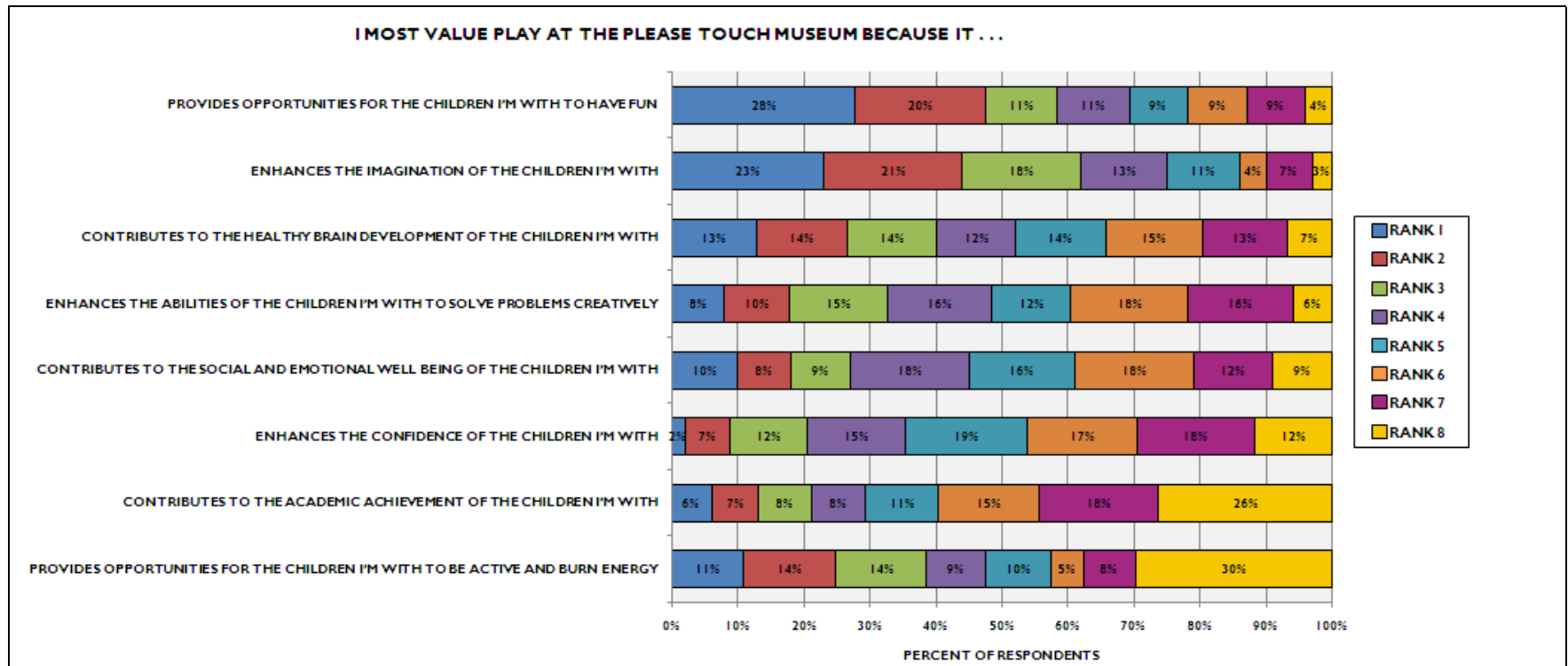
After respondents ordered the cards, data collectors recorded each statement’s rank from “1” to “8,” where “1” indicates the statement that *most* accurately describes how respondents value play at PTM and “8” indicates the statement that *least* accurately describes how respondents value play at PTM.

Figure 5 shows respondents' rankings of "1" to "6" for each statement. Notice that, in the figure, a color is keyed to each rank (see the legend on the right side of the figure). In looking at Figure 5, notice the following:

- ♦ The statement "Provides opportunities for the children I'm with to have fun" was most frequently ranked "1"; that is, 28 percent of respondents thought this statement most accurately describes how they value play at PTM.
- ♦ The statement "Provides the opportunities for the children I'm with to be active and burn energy" was most frequently ranked "6"; that is, 30 percent of respondents thought this statement least accurately describes how they value play at PTM.
- ♦ The statement "Contributes to the healthy brain development of the children I'm with" has the most even spread of ranks (no more than 15 percent of respondents and no fewer than 7 percent of respondents agreed on any one ranking). That is, there was the least consensus among respondents regarding this statement.

**FIGURE 5**

**RANKS ASSIGNED TO EACH STATEMENT REGARDING HOW RESPONDENTS MIGHT VALUE PLAY AT PTM (FREQUENCY)**



## VISITOR CHARACTERISTICS ASSOCIATED WITH THE RANKINGS

The mean rank for each of the eight statements was compared by gender, age, description of visit group, and ethnicity. There are several significant differences. (Tables presenting the following data are in Appendix P):

- ♦ Non-Caucasian visitors are more likely to indicate that the statement “Contributes to the academic achievement of the children I’m with” accurately describes how they value play at PTM than are Caucasian visitors.
- ♦ African-American visitors are more likely to indicate that the statement “Contributes to the academic achievement of the children I’m with” accurately describes how they value play at PTM than are non-African-American visitors.
- ♦ Non-African American visitors are more likely to indicate that the statement “Provides opportunities for the children I’m with to have fun” accurately describes how they value play at PTM than are African-American visitors.

# PRINCIPAL FINDINGS: EXIT INTERVIEWS

## INTRODUCTION

This section of the report presents findings from interviews conducted with eligible<sup>20</sup> adult visitors<sup>21</sup> exiting the Museum between August and October 2009. Data collectors intercepted 227 visitors, and a total of 73 visitors agreed to participate, while 154 declined, for a participation rate of 32 percent.

In reading this section, note that the data from exit interviews were analyzed either qualitatively or coded using rubrics. Qualitative analysis and rubric-coding each have unique benefits, which the reader must acknowledge to understand how best to interpret the data. To summarize each method of analysis:

### QUALITATIVE ANALYSIS

#### METHOD:

In analyzing data qualitatively, RK&A read the transcripts, and, as trends emerged, grouped like data. This method of analysis is organic, since all trends come directly from the interviews and all nuances in visitors' responses are accounted for.

#### PRESENTATION OF DATA:

All data are presented in narrative, along with exemplary quotations from the interviews.

### RUBRIC CODING

#### METHOD:

In analyzing data using rubrics, RK&A began with traditional qualitative analysis. Then, based on the trends that emerged from the qualitative analysis, RK&A placed them along a 4-level continuum: “below beginning” (level 1), “beginning” (level 2), “developing” (level 3), and “highly developed” (level 4). The highest level of the continuum (level 4) defines the ideal perceptions and experiences that *the Museum* hopes its visitors attain.<sup>22</sup> Interviews were then read and coded on the rubric, allowing for a quantitative analysis of data. Such analysis is valuable because it identifies and quantifies a range of perceptions and experiences regarding particular items.

#### PRESENTATION OF DATA:

Data are presented in the context of each rubric item and the levels of the continuum. Percents are used to quantify how many visitors were coded at each level of the rubric. Exemplary quotations from the interviews are used to clarify the range of perceptions and experiences.

<sup>20</sup> Interviews were conducted with visitors who: (1) were 18 years or older; (2) spoke English; (3) were visiting the Museum with children under the age of 18; and, (4) were selected using a continuous random selection method.

<sup>21</sup> In this section of the report, the word “visitor” is used to refer to adult visitors.

<sup>22</sup> The ideal perceptions and experiences emerged from the strategic plan as well as meetings with PTM staff.

## VALIDITY OF THE SAMPLE

Since part of the data were analyzed quantitatively (rubric-scored), RK&A compared the demographics and characteristics of visitors that agreed to participate in the study (respondents) with visitors that refused to participate in the study (refusals) to determine whether the sample is representative. Since the strength of statistical analyses relies on a representative sample, efforts were made to improve this likelihood.

RK&A compared respondents and refusals by gender, age, and description of visit group (e.g., number of adults and children, and ages of children). There are two statistically significant differences between respondents and refusals (tables displaying the information below are in Appendix Q):

- ♦ Visitors at the Museum with at least one older child (6-12 years) are more likely to agree to participate in the study than visitors without at least one older child.
- ♦ Visitors at the Museum with at least one other adult in their visit group are more likely to agree to participate in the study than visitors visiting without another adult.

Thus, the sample may not represent the opinions of adults without at least one older child and adults visiting without another adult.

## DATA COLLECTION CONDITIONS

About one-half of interviews were administered during the summer (August 22-September 2), and one-half during the fall (October 1-October 17) (49 percent and 51 percent, respectively). More than two-thirds of interviews were administered during weekdays (69 percent), 29 percent were administered during weekend days, and 3 percent were administered on Target First Wednesdays<sup>23</sup>. During about one-half of data collection, crowding in the Museum was high<sup>24</sup> (51 percent); crowding in the Museum was low to moderate the remaining data collection period (50 percent).

## DEMOGRAPHIC CHARACTERISTICS AND BACKGROUND INFORMATION

Interviewees' demographic characteristics and background information were comparable to those of questionnaire respondents and are:

- ♦ Interviewees are primarily female (66 percent) and Caucasian (78 percent);
- ♦ Three-quarters are between the age of 25 and 44 (74 percent); the mean age is 39;
- ♦ Two-thirds of interviewees were visiting with at least one other adult (66 percent);
- ♦ Most interviewees were visiting PTM with one or two children (87 percent);
- ♦ Most interviewees were visiting with at least one young child (0-5 years) (88 percent);
- ♦ Most interviewees are the parents of the children with whom they are visiting (82 percent);
- ♦ About one-half of interviewees were first-time visitors to the Museum (51 percent);

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<sup>23</sup> Target First Wednesdays are hosted on the first Wednesday of each month. The Museum is open for free from 5-7p.m. on these nights and offers special programs. Questionnaires were administered at the Target First Wednesdays held on September 2 and October 7.

<sup>24</sup> Low attendance is defined as less than 1,000 visitors, moderate attendance as between 1,000 and 1,800 visitors, and high attendance as more than 1,800 visitors.



- ♦ More interviewees reported repeat visitation to the Museum at its new site (Fairmount Park) (86 percent) than to its old site (21<sup>st</sup> Street) (69 percent);
- ♦ Thirty-eight percent of interviewees are members of PTM; and
- ♦ Eighty-three percent of interviewees identified themselves as Caucasian/White and 15 percent identified themselves as African-American/Black.

## OPINIONS OF OVERALL EXPERIENCE

Data collectors asked interviewees to share their thoughts about their PTM experience including those aspects that were most and least enjoyable. Data were analyzed *qualitatively*, and findings are presented below.

### MOST AND LEAST ENJOYABLE EXPERIENCES FOR CHILDREN

When asked what their children enjoyed most about PTM, nearly all interviewees described one or more specific exhibits or experiences in the Museum that were their children's' favorite. The most commonly mentioned favorite exhibit by far was the Shoprite (grocery store), which parents said their children liked most because it is hands-on and allows them to pretend they are adults (see the first quotation below). A few interviewees said they or their children liked the grocery store because it was realistic or filled with a lot of play items to touch or pick up (see the second quotation below).

I think they like the fact that they can pretend to be just like the grownups and pick their food...so they like the pretend play. [female, 42]

The store [is her favorite] I think because it's so much like doing the real thing and there's so much stuff in there, there [are] so many objects. There [are] a lot of areas you can only do one or two things, but in the store you have 70, 80 different items to pick from. [female, 34]

Many interviewees said their children most enjoyed Roadside Attractions or Water Works, primarily because they are active, interactive, and movement-oriented (see the quotation below). Several said their children most enjoyed Alice in Wonderland, the carousel, or Flight Fantasy, and some said their children most enjoyed the program room or CHOP (the hospital). A few interviewees most enjoyed one of the following: the Froebel blocks in the Centennial exhibit, Rainforest Rhythm, hamster wheel in Flight Fantasy, and the train area. More than ten other areas in the Museum, including the McDonald's, were mentioned as favorites of only one or two interviewees' children.

Well it's very interactive, he's able to pick up the bricks, put them in the wheelbarrow, dump them in the truck, take them out of the truck, put them out on the pulley and jump in them and throw them. [male, 39]

When asked to explain why certain areas were most enjoyed, most interviewees attributed the preference to interactive and hands-on qualities, while several mentioned pretend/adult play or active and movement-oriented experiences.

When asked what their children least enjoyed about PTM, most said that there was nothing in particular that their children did not like; in general, they liked it all. Several interviewees pointed out specific museum areas that were less well-liked by their children. A few of them said their children least liked the cars in Roadside Attractions and Flight Fantasy because the exhibition elements in these areas were broken or less interesting to girls. A few interviewees said their children did not like the Alice in

Wonderland area, the imagination and dramatic play areas, or the carousel, either because these areas were plain and passive or not age-appropriate (see the quotation below). Over ten other areas in the Museum, from the shoe area to the piano from *Big*, were mentioned by one or two interviewees as areas of the Museum their children liked the least, but these responses were mostly idiosyncratic.

As soon as he got down [the Alice in Wonderland maze], he came right back out again. He didn't like it. (Okay. Do you know why that might be?) I think it was kind of plain. I mean, he was getting lost and everything, but once again, passive. [female, 37]

### **MOST AND LEAST ENJOYABLE EXPERIENCES FOR ADULTS**

Interviewees were also asked which areas of PTM they, as adults, most enjoyed. Many interviewees said they most enjoyed watching their children play and interact with the exhibition elements, or playing with their children in the Museum (see the first quotation below). Similarly, many interviewees said they most enjoyed the chance to be in a place where their children could be on their own, where they did not have to worry or say “no” (see the second quotation below).

She was going in and out of the Alice in Wonderland [area], the plastic things that were coming down and she was like, ‘Come on. Come with me!’ She had all three of us in there. That was pretty fun. [female, 37]

I like that it's safe. I can watch them. They can basically run around and I can kind of see where they're going. I prefer them running around, doing stuff, getting into trouble. . . as opposed to sitting in front of the television for the afternoon. [female, 36]

Several interviewees said they most enjoyed the program room, Water Works, the Alice in Wonderland area, or the shopping area. A few said they most liked the Centennial exhibition, the carousel, or Roadside Attractions. A few others said they most enjoyed that the Museum was not too crowded, that the cafeteria had a variety of options or affordable prices, or that the Museum was laid out well and provided many opportunities to sit down on benches. Over twenty other elements—from cleanliness to the hamster wheel—were mentioned as most liked elements by one or two interviewees, but these were mostly idiosyncratic responses (see the quotation below).

This is place is so clean. That's what I love. I loved that it's also different. I love that they used such imagination with everything. That I feel safe in here. I can't think of anything else. [female, 32]

Interviewees were also asked what they liked least about PTM. Many said that there was nothing that they did not particularly like, while several said that things related to the Museum's crowds bothered them, including rude visitors, noise, or the crowdedness itself. Some interviewees said that they least liked the Alice in Wonderland area, while a few others said that poorly functioning or broken exhibition elements were their least favorite. One or two interviewees each mentioned more than ten different items—mostly related to non-exhibition-related things such as bathroom dirtiness or cafeteria food—as their least liked Museum aspect.

## PERCEPTIONS OF AND ENGAGEMENT WITH VARIOUS MUSEUM ELEMENTS

Interviewees were asked to describe their perceptions of and experiences with various elements of the Museum, including:

- ♦ Memorial Hall
- ♦ The toy collections
- ♦ The works of art
- ♦ The *Value of Play* signage

Data were *rubric-coded*, and the findings are presented below.<sup>25</sup>

### MEMORIAL HALL

To understand visitors' perceptions of the PTM's new location at Memorial Hall, interviewees were asked to discuss their thoughts on the building and the role it played in their visit. Visitors' perceptions of the building were coded along a continuum from "below beginning perceptions" to "highly developed perceptions." The largest portion of interviewees has "below beginning perceptions" for Memorial Hall (36 percent) (see Table 28). A thorough presentation of findings follows Table 28.

**TABLE 28**  
**RUBRIC LEVELS FOR PERCEPTIONS OF MEMORIAL HALL**

LEVEL	%
Below Beginning Perceptions (1)	36
Beginning Perceptions (2)	19
Developing Perceptions (3)	21
Highly Developed Perceptions (4)	24

#### **Below Beginning Perceptions of Memorial Hall:** 36 percent of interviewees

These interviewees described the building simply, saying "it's nice" or "pretty" but provided no further explanation of their opinions or the role that the building played in their visit experiences.

#### **Beginning Perceptions of Memorial Hall:** 19 percent of interviewees

These interviewees talked about Memorial Hall primarily in regard to its functionality. For instance, some of these visitors said they appreciated the building's easy site lines and wide spaces, through which they could move with ease. Most of these interviewees also described the building as "pretty" or "nice" although they did not expound on its beauty. For examples of "beginning perceptions," see the quotations below and on the following page.

(What are your thoughts about the building?) It's beautiful. (It's beautiful? Okay.) Yeah. It's clean. It's spacious. I mean, there seemed to be a lot of people around to give you a hand if you needed it. So it was good. [male, 37]

<sup>25</sup> Rubric scores were tested by demographics and visit characteristics, and no statistically significant findings emerged.

The building? Oh, very nice. Very spacious. (Okay. Is there anything else you'd like to add?) It's just very colorful. It's so child friendly [and] age-appropriate. [female, 43]

**Developing Perceptions of Memorial Hall:** 21 percent of interviewees

These interviewees talked mostly about the beauty and/or architecture of Memorial Hall. They also explained what about the building's beauty or architecture they liked; however, they did not mention the building's historic significance. Some of these visitors also noted the building's functionality. See the quotation below for an example of "developing perceptions."

(What are your thoughts about this building?) It's definitely so beautiful because it is so huge and [has a] high ceiling and [has] marble and stone. [female, 35]

**Highly Developed Perceptions of Memorial Hall:** 24 percent of interviewees

When asked about the building, these interviewees mentioned the historical significance of Memorial Hall, among other things. Many of these also commented on the building's beauty and/or grand architecture as well as its functionality. For examples of "highly developed perceptions," see the quotations below.

(And what are your thoughts about the building?) Oh, it's really nice that they are using this building and it's still here from the Centennial. I think that's really great. [female, 60]

(So what are your thoughts about the building?) Amazing building. This is awesome.  
(Anything else about the building?) No. Well, I enjoyed the things you guys have or that they have up about the history of Memorial Hall. I thought it was really neat to give the adults something to read while the kids played. [male, 32]

**TOY COLLECTIONS**

To understand visitors' engagement with PTM's toy collections, which are housed in glass cases throughout the exhibit areas, interviewees were asked to talk about their experiences with the collections and the role they played in their visit. Responses fell along a continuum from "below beginning engagement" to "highly developed engagement." Interviewees were mostly at the "beginning engagement" and "developing engagement" levels (32 percent and 30 percent, respectively) (see Table 29). A thorough presentation of findings follows Table 29.

**TABLE 29**  
**RUBRIC LEVELS FOR ENGAGEMENT WITH TOY COLLECTIONS**

LEVEL	%
Below Beginning Engagement (1)	15
Beginning Engagement (2)	32
Developing Engagement (3)	30
Highly Developed Engagement (4)	23

**Below Beginning Engagement with Toy Collections:** 15 percent of interviewees

These interviewees said they did not notice the toy collections.

**Beginning Engagement with Toy Collections:** 32 percent of interviewees

These interviewees said they noticed the toy collection and described them as decorative or made cursory, non-descriptive comments about their engagement with the toy collections, such as, “they’re nice.” For an example of “beginning engagement,” see the quotation below.

(So what about some of the toy collections in the display cases?) She was trying to play with them like the Star Wars and things like that. Yeah, that was good too. [female, 24]

**Developing Engagement with Toy Collections:** 30 percent of interviewees

These interviewees described the toy collection in terms of its personal, historic, or nostalgic value. However, when asked what role the toy collection played in their visit, visitors did not mention talking to their child(ren) about them. Instead, adult visitors said they experienced the toys alone or with another adult. For an example of “developing engagement,” see the quotation below.

(Did you notice any of the artifacts that were in the different collection cases?) Yes, I enjoyed looking at them. Some of them my husband and I were looking at and saying, ‘I remember [having] one of those.’ (Any in particular that you remembered or that you shared?) There was a little dog pull toy in one of the cases. And both my husband and I remember either having one of those or knowing somebody who had one. And, I thought it was interesting [to see] the original Mr. Potato Head. So, I really liked looking at that one. [female, 30]

**Highly Developed Engagement with Toy Collections:** 23 percent of interviewees

These interviewees described the toy collection in terms of its personal, historic, or nostalgic value, as did interviewees at the “developing engagement” level. However, when asked about the role the collection played in their visit, these interviewees said they talked about the toys with their child(ren) during the visit. For an example of “highly developed engagement,” see the quotation below.

(What do you think about the different artifacts that you see around the place?) I was laughing. I kept pointing them out to my child because a lot of the stuff [in the collection] we remember[ed] from childhood. So the fact that they’re behind glass now and being displayed in a museum, we found it kind of funny actually. But no, I liked that. I liked it. [female, 29]

**ART COLLECTIONS**

Interviewees were asked for their thoughts on the various works of art displayed throughout PTM. Responses emerged relatively evenly along a continuum from “below beginning engagement” to “highly developed engagement,” but the largest portion of interviewees were at the “beginning engagement” level (32 percent) (see Table 30). A thorough presentation of findings follows Table 30.

**TABLE 30**  
**RUBRIC LEVELS FOR ENGAGEMENT WITH ART COLLECTIONS**

LEVEL	%
Below Beginning Engagement (1)	23
Beginning Engagement (2)	32
Developing Engagement (3)	23
Below Beginning Engagement (4)	23

**Below Beginning Engagement with Art Collections:** 23 percent of interviewees

These interviewees said they did not notice the works of art.

**Beginning Engagement with Art Collections:** 32 percent of interviewees

These interviewees said they noticed the works of art but expressed no opinion or made little to no comment on them. Many of them said that they were too busy watching their child(ren) to truly observe and appreciate the art. For an example of “beginning engagement,” see the quotation below.

(Did you notice any of the art, such as the sculptures or murals, during your visit?) I did, some. I think that I was watching my 4-year-old run around more than I was looking at those things. I’m getting to see more of it right now just sitting here talking to you than I did before.  
[male, 50]

**Developing Engagement with Art Collections:** 23 percent of interviewees

These interviewees said they noticed the works of art and described them positively, yet simply, as “enjoyable” or “nice.” Some of these interviewees—like those at the “beginning engagement” level—said that they were too busy watching their child(ren) to truly observe and appreciate the art, although they indicated—in vague terms—that art works enhanced their PTM experience. Many times, they referred to art as making PTM more visually appealing or “better.” For an example of “developing engagement,” see the quotation below.

(Did you notice any of the art, such as the sculptures or murals, during your visit?) Yeah. I think I did. . . . only in Alice in Wonderland, I think. I did notice that. (Okay. So, similar to the previous question, how do you feel that that played a role in your experience today?) You know, for me, I’m very visual. So I think anything that looks good and looks pretty and is vibrant and entertaining is always going to play a positive role [in my museum experience]. [female, 43]

**Highly Developed Engagement with Art Collections:** 23 percent of interviewees

These interviewees said they noticed and liked the works of art and provided a specific reason for their appreciation of the works of art—thus differentiating “highly developed engagement” from “developing engagement.” Interviewees talked about the art in various ways, including describing it as sensory-rich, theme-oriented, inspiring, or stimulating for children and/or adults. For examples of “highly developed engagement,” see the quotations below.

(Did you happen to see any of the art sculptures today?) You mean like the elephant? (Yes. How do you think that they played into your experience here?) Sometimes he [her child] has trouble speaking; he doesn’t really talk. Sometimes I’m able to point out [a] thing so that it will encourage him. So when [he’s] seeing a statue or seeing a color, I will say ‘Is that a baby?’ or ‘Is that a stick?’ [female, 35]

(Did you notice any art, such as the sculptures or murals, during your visit?) Well, especially the one—the torch. My older daughter always loves to visit that; it’s your favorite thing in the building, right? (So how—if at all—did that play a role in your experience?) . . . . Not much except for helping my daughter feel excited when she walks in here and gets to see that. (What are your thoughts about incorporating art into your general experience here at the museum?) It gives us another thing to enjoy looking at and discovering together; we definitely do that. My child and I kind of interact talking about it. [female, 36]

## VALUE OF PLAYSIGNS

Interviewees were asked about their engagement with and thoughts on *Value of Play* signage. The majority of interviewees' responses are in the levels of "below beginning engagement" and "beginning engagement" levels (33 percent and 35 percent, respectively) (see Table 31). A thorough presentation of findings follows Table 31.

**TABLE 31**  
**RUBRIC LEVELS FOR ENGAGEMENT WITH VALUE OF PLAY SIGNS**

LEVEL	%
Below Beginning Engagement (1)	33
Beginning Engagement (2)	35
Developing Engagement (3)	17
Highly Developed Engagement (4)	15

### **Below Beginning Engagement with *Value of Play* Signs:** 33 percent of interviewees

These interviewees said they did not notice the *Value of Play* signage.

### **Beginning Engagement with *Value of Play* Signs:** 35 percent of interviewees

These interviewees said they noticed the *Value of Play* signs but made little to no comment about them. Many of them said they were too busy watching their child(ren) to read the signage. For an example of "beginning engagement," see the quotation below.

(Did you happen to notice this sign at all or any signs like this today?) Uh-huh, I did. (Any in particular?) A couple, yeah. I don't remember which one. (If not, it's not a big deal.) No...no. I mean [I] just kind of randomly would read them. [female, 32]

### **Developing Engagement with *Value of Play* Signs:** 17 percent of interviewees

These interviewees said they noticed the *Value of Play* signs and described them generally as helpful or interesting, although they said they signs did not necessarily impact them or their visit. For an example of "developing engagement," see the quotation below.

(How—if at all—today did they [*Value of Play* signs] play a role in your experience?) I remember noticing one and reading it. It was interesting to me. I don't know if it changed anything we did, but it definitely does kind of affirm what I already think about play. [female, 35]

**Highly Developed Engagement with *Value of Play* Signs:** 15 percent of interviewees

These interviewees said they noticed the *Value of Play* signs and explained the way they were helpful or interesting. Further, these interviewees explicitly explained the impact that the signs had on them and/or their visit. For an example of “highly developed engagement,” see the quotation below.

(Did you notice the *Value of Play* signs?) Oh, yeah. I’m kind of an obsessive reader, so yeah, I always read them. (Okay. So they kind of played a role in your experience?) Yes, they do. I like that they have them and the cards that they give out with the books and different activities you can do with the kids. (Okay. So do you have anything else to say about how they played a role today?) I usually end up taking them [cards] home or reading them and writing one or two—I might write something down I didn’t realize or know about and then go home and put it into practice. [female, 42]

**VISITORS’ PERCEPTIONS OF OVERALL PTM EXPERIENCES**

Interviewees were asked to talk about their perceptions of overall PTM experiences, including:

- ♦ the value of PTM
- ♦ the outcome for children
- ♦ the role of the adult at PTM

Data were *rubric-coded*, and the findings are presented below.<sup>26</sup>

**VALUE OF PTM**

Interviewees were asked what they most value about PTM. Two-thirds of interviewees’ had “beginning perceptions” regarding PTM’s value (69 percent) (see Table 32). A thorough presentation of findings follows Table 32.

**TABLE 32**  
**RUBRIC LEVELS FOR PERCEIVED VALUE OF PTM**

LEVEL	%
Below Beginning Perceptions (1)	6
Beginning Perceptions (2)	69
Developing Perceptions (3)	11
Highly Developed Perceptions (4)	14

<sup>26</sup> Rubric scores were tested by demographics and visit characteristics, and no statistically significant findings emerged.



**Below Beginning Perceptions of the Value of PTM:** 6 percent of interviewees

These interviewees value PTM for practical reasons—its safety, cleanliness, and/or accessibility. For an example of “below beginning perceptions,” see the quotation below.

(What do you most value about this Museum and your experiences here?) You know, having a safe, interesting, and fun place for my kids to interact; we live close and have a membership, so I value coming often.

**Beginning Perceptions of the Value of PTM:** 69 percent of interviewees

Overall, these interviewees said they most value PTM generally because it is a fun and active experience for their child(ren). In doing so, they used words like, “hands-on,” “fun,” “child-friendly,” “unique,” provides for “quality time,” or is “entertaining.” While some interviewees also mentioned that they value the Museum for practical reasons, they placed greater emphasis on providing a fun activity for their child(ren). For examples of “beginning perceptions,” see the quotations below.

(So what do you most value about the Museum and your time here?) I don’t know. That everything was very interactive and hands-on. And also—you know this is no small thing for children—almost everything worked. [male, 37]

(What do you most value about this Museum and your experiences here?) It’s exactly what I think its mission is—to be a kids’ wonderland. . . . I mean, you come here, and you don’t need to keep your eye on her. You feel very safe. I think the staff is very helpful. It’s nice to just come to something that’s sort of child-friendly and in our city. [male, 35]

(What do you value most about this Museum and your experiences?) It’s just great to have a place to bring her indoors. It started out as a rainy day, so having a membership where we can come and, if we spend a half hour and go home, that’s great. And, if we spend three hours and go home, that’s great. There’s nothing [here] where you really have to say [to the children], ‘No, no, no. You can’t do that’ because everything’s really age-appropriate. [female, 37]

**Developing Perceptions of the Value of PTM:** 11 percent of interviewees

These interviewees said they most value PTM as a place where children can use or develop various skills and abilities, including social skills, experimentation, imagination, or decision-making. These visitors did not refer explicitly to education or learning when describing the skills. Many also said they valued the Museum for its practical aspects, as described in the “below beginning perceptions” level, and for providing a fun experience for their child(ren), as described in the “beginning perceptions” level. For an example of “developing perceptions,” see the quotation below.

(The Museum is really interested in how visitors perceive the Museum and its role in visitors’ lives. So what do you most value about this Museum and your experiences here?) I think [it allows children the] free[dom] to explore and there aren’t always a lot of places where you can do that. (Why is that most valuable for you?) I think, for me, [it] is to foster her curiosity. [male, 39]

**Highly Developed Perceptions of the Value of PTM:** 14 percent of interviewees

These interviewees said they most value that PTM is educational or a place where children can learn. All of these interviewees went on to describe learning in regard to various skills and abilities, including social skills, experimentation, imagination, or decision-making. This level is different from “developing

perceptions” because interviewees made explicit links between learning or education and the skills they hope the child(ren) will acquire. For an example of “highly developed perceptions,” see the quotation below.

(What do you value most about the Museum and the experience that it provides overall?)  
There’s a lot of teaching going on. There’s a lot of interacting. There are lots of opportunities for them [children] to problem solve, lots of opportunities for them to interact with other children. [They learn to] negotiate their way around the toys. You know, you have six kids jump on a bus, they have to figure out who’s going first and who’s going next and someone’s pushing someone out of the seat. So it gives them lots of opportunities to learn social skills and life skills.

### VISIT OUTCOME FOR CHILDREN

Interviewees were asked to identify what they hope their child(ren) take away from their experiences at PTM. Almost two-thirds of interviewees had “below beginning perceptions” and “beginning perceptions” regarding outcomes for their child(ren) (28 percent and 35 percent, respectively) (see Table 33). A thorough presentation of findings follows Table 33.

**TABLE 33**

**RUBRIC LEVELS FOR PERCEIVED VISIT OUTCOME FOR CHILDREN**

LEVEL	%
Below Beginning Perceptions (1)	28
Beginning Perceptions (2)	35
Developing Perceptions (3)	24
Highly Developed Perceptions (4)	14

#### **Below Beginning Perceptions of the Visit Outcome for Children:** 28 percent of interviewees

These interviewees described their visit outcomes simply as “fun” and/or “entertainment.” Some implied a purely playground-like enjoyment. For examples of “below beginning perceptions,” see the quotations below.

(So what do you both hope your child will take away from her experiences here?) Just that it was a fun day and that she’ll want to come back. [male, 37]

(What do you hope that the children will take away from their experience here?) [They will take away] that they did something really fun in Philadelphia because they’re from Cleveland. So there’s the fact that they came to visit Grandma and Granddad and there was something really fun to do that they’ll remember. [female, 60]

#### **Beginning Perceptions of the Visit Outcome for Children:** 35 percent of interviewees

These interviewees described visit outcomes in the context of the experience being special. For example, these interviewees described the gains as having had a “unique,” “new,” and/or “enriching” experience. Interviewees may have referred to learning although they did not describe it in terms of skills. For examples of “below beginning perceptions,” see the quotations on the following page.

(So what do you hope your child will take away from their experiences here?) Having fun. (Having fun? Okay, can you say a little bit more about that, such as how they have fun here?) I mean, I hope they enjoy it. It's a museum; you want your children to enjoy going out and seeing the world. I don't know if I have a long-term goal or a short-term goal, but that would be a goal. [female, 31]

(What do you hope your child will take away from the experiences here?) Just a sense of being able to explore the world and having a good time doing that. [male, 28]

### **Developing Perceptions of the Visit Outcome for Children:** 24 percent of interviewees

These interviewees identified visit outcomes in terms of skills and abilities, such as social skills, imagination, creativity, experimentation, or decision-making, but did not use words like “education” or “learning.” For examples of “developing perceptions,” see the quotations below.

(What do you hope your child will take away from the experience?) Playing with other kids, so it's sharing, it's trying to wait your turn, so that kind of stuff; I guess [that] is one thing that I'm looking forward to [for my child]. You know, kind of socialization—[that] sort of thing. [female, 34]

(What do you hope your child will take away from their experience here?) The interest in the different types of things that he can play with and not just stuff that he's used to. (Okay. Why would you say that's important?) He spends 90 percent of his time either in my home or outside my home at daycare. So getting him into new environments and really exposing him to new things [is important]. Plus, given his age, being under two years old, he has issues sharing, so I think being around some of the bigger kids who won't just let him take stuff away from them is good. Also, being around other kids and realizing he has to share the exhibits is good. [female, 37]

### **Highly Developed Perceptions of the Visit Outcome for Children:** 14 percent of interviewees

These interviewees described visit outcomes in terms education and learning. They went on to describe education and learning as various skills and abilities, such as social skills, imagination, creativity, experimentation, or decision-making. This level is different from “developing perceptions” because interviewees explicitly linked learning or education to skills they hoped their child(ren) would acquire. For examples of “highly developed perceptions,” see the quotations below and on the following page.

(What do you hope your children will take away from their experiences here?) Well, it's teaching her how to learn how to play with other kids. That's a valuable thing. Like here you have to learn how to share and take turns and I like that a lot. (So why do you say that?) Because she's the only child, so she doesn't really have to share with people because it's just hers. So when she comes here, it teaches her how to share with others. (Okay. You mentioned a little bit about learning, so what would you say learning means to you?) Oh, learning means a lot to me especially with my child because, without her knowing things out here in the world, she wouldn't be able to go anywhere. So, just the fact that they had different colors and all other animals, it's just a learning experience all through the museum and I like that a lot. (Okay. So what sort of learning would you say took place for your child today?) Well, she knew the colors of the stop signs and things like that. It helped her play with the stop signs, live cars, and pick up the truck with the balls. It just gives her a lot of things to do that she just doesn't do at home. [female, 24]

(What do you hope that she's going to take away from her time here?) Just learning experiences whether it's figuring how to put something in a hole today or taking turns with other kids.  
[female, 34]

## PERCEPTIONS OF ADULT ROLE

Interviewees were asked a series of questions to uncover their perceptions of the adult role in children's play. Almost two-thirds of interviewees had "below beginning perceptions" and "beginning perceptions" of their adult role (36 percent and 28 percent, respectively) (see Table 34). A thorough presentation of findings follows Table 34.

**TABLE 34**  
**RUBRIC LEVELS FOR PERCEPTIONS OF ADULT ROLE**

LEVEL	%
Below Beginning Perceptions (1)	36
Beginning Perceptions (2)	28
Developing Perceptions (3)	24
Highly Developed Perceptions (4)	11

### **Below Beginning Perceptions of Adult Role:** 36 percent of interviewees

These interviewees described their role in their children's play as supervisory. These interviewees said things like, "I sat and watched" or "kept an eye on my child while s/he played." For an example of "below beginning perceptions," see the quotation below.

(So what role did you play in today's visit?) Today I was more or less a casual observer with intervention if she was running too far away. . . . (Were there any exhibits that you thought really helped you facilitate that kind of role?) Probably the Alice in Wonderland maze area. I just let her wander, and I just stayed a couple of steps behind. She often didn't look back to see where I was. [male, 35]

### **Beginning Perceptions of Adult Role:** 28 percent of interviewees

These interviewees described their role in their children's play as both supervisory and interactive. In interacting with their child(ren), these interviewees did not engage in play, but, rather, acted as an aid when their child(ren) needed help operating an exhibit. For an example of "beginning perceptions," see the quotation below.

(So did you play any sort of role in today's visit?) Just a little bit. Just showing him how things work. (Okay. In what ways, if any, did the exhibits help facilitate your role?) Like I showed him how the piano worked, [how it] made different noises, how the cranks worked to make the machines go. [male, 38]

### **Developing Perceptions of Adult Role:** 24 percent of interviewees

These interviewees described their role in their children's play as primarily interactive; however, they did not explain how or why they interacted, although it seemed to be play-based. Some also mentioned supervisory roles as well as aiding their child(ren) while using exhibits. For an example of "developing perceptions," see the quotation on the following page.

(What is your usual role in your child’s play?) Like me playing with her? I play with my child all of the time. (Okay. Do you have any sort of particular role that you assume when you play with your child?) I guess like her partner. When I play with her, I’m more like her partner than her parent. (Okay. What role did you play in today’s visit?) The same role. [female, 24]

**Highly Developed Perceptions of Adult Role:** 11 percent of interviewees

These interviewees explicitly described engaging in play with their child(ren). Some also mentioned supervisory roles as well as aiding their child(ren) while using exhibits. For an example of “highly developed perceptions,” see the quotation below.

(So what role did you play in today’s visit?) I was a caretaker today; then we went into the program room, and I helped them to make the rockets and to do their activities—their crafts and things. And then in the duck pond area, I pretended with them. [female, 42]

**VISITORS’ PERCEPTIONS OF PLAY**

Interviewees were asked to describe their perceptions of play. Data were *rubric-scored*, and the findings are presented below.<sup>27</sup>

Almost three-quarters of interviewees had “beginning perceptions” and “developing perceptions” (41 percent and 36 percent, respectively) (see Table 35). A thorough presentation of findings follows Table 35.

**TABLE 35**  
**RUBRIC LEVELS FOR PERCEPTIONS OF PLAY**

LEVEL	%
Below Beginning Perceptions (1)	8
Beginning Perceptions (2)	41
Developing Perceptions (3)	36
Highly Developed Perceptions (4)	15

**Below Beginning Perceptions of Play:** 8 percent of interviewees

These interviewees described play as purely “fun” and/or “entertainment.” For an example of “below beginning perceptions,” see the quotation below.

(When I say the word “play,” what does that mean to you?) It means to be able to play and have fun. (Okay. Can you say more about that?) To be able to have fun, be a child, and be able to do what children do. [male, 28]

**Beginning Perceptions of Play:** 41 percent of interviewees

These visitors described play simply as an “interactive” and/or a “hands-on” activity but did not refer to it in terms of skills or abilities. Many interviewees also described play as “fun” and/or “entertainment,”

<sup>27</sup> Rubric scores were tested by demographics and visit characteristics, and no statistically significant findings emerged.

as described in the “below beginning” level, and some described play in terms of “freedom” and the removal of barriers. For an example of “beginning perceptions.”

(So when I say “play,” what does that mean to you?) It’s just manipulating objects sometimes for their intended use and sometimes for something totally different. . . . (All right. So what would you say the impact is of that type of play on her? How does that impact her?) I suppose you remove a lot of borders. It’s difficult to answer. I tell you what I really try to do with her as far as play goes is I try to remove as many obstacles. . . . Honestly, if she’s not going to hurt herself or break anything, I’m fine with it. [male, 39]

### **Developing Perceptions of Play:** 36 percent of interviewees

These interviewees described play in terms of skills or abilities like imagination, creativity, experimentation, or decision-making, but *did not* explicitly associate it with learning or education. Many of these interviewees also describe play in terms of “freedom” and “exploration.” For examples of “developing perceptions,” see the quotations below.

(When I say the word “play” what does that mean to you?) Imagination, pretend play, being active, running around outside, [or on] playgrounds. Again, through my 4-year-old, she does a lot of pretend play and imagination and stuff like that. She’s also involved in dance. So anything that gets her active and moving and not a [being] bump on a log and not [being] one of these video game kids. [female, 35]

(When I say “play,” what does that mean to you?) Really, exploration at this age—kind of inquisitiveness, getting them to ask questions about their world, not worrying about breaking stuff. That’s part of play. (Okay, so what makes you say that, then?) I feel like for kids ages 7 and 1, like my kids, you want to be able to feel a freedom, to kind of take risks, try things, and not constantly be in an environment where you can’t touch things that you’re going to break and that you can’t climb in. (So then, how does your child usually play?) Well, I have one [child] who’s all about climbing and another who’s all about imagination and story-telling. . . (What do you think the impact is of that play on your children?) I feel like they really grow, and I feel like mentally the imagination stuff [happens]. [female, 35]

(When I say “play,” what does that mean to you?) What does “play” mean? Excitement and enjoyment. (What makes you say that?) I think that if a child gets excited and interacting and is just having fun when they’re playing then they’re happy. (How does your child usually play?) Oh, I don’t know. They just sit down and they play board games, they interact with different dramatic play and things like that. (What do you think the impact is of that play on your children?) It helps to broaden their character and their imagination. [female, 31]

### **Highly Developed Perceptions of Play:** 15 percent of interviewees

These interviewees described play in terms of skills or abilities like imagination, creativity, experimentation, or decision-making *and explicitly* associated play with learning or education. For examples of “highly developed perceptions,” see the quotations below and on the following page.

(When I say “play,” what does that mean to you?) For him, even stuff when he’s learning is playing. You know, he might not realize he’s playing or learning when he’s playing. But all the different exhibits, again, he understands what the car is for, what parts of the car are for, and what happens when you do stuff with water. So I mean, he’s learning while he’s playing. (Okay. So what makes you say that? Is there anything you’d like to add?) Well, like the water. Usually,

when he's playing with water, it's in a confined environment like a pool or a tub. So seeing how the things pushing against the water, making the water move and spouts and fountains...I think that just teaches him dynamics and stuff that he doesn't know. [female, 37]

(When I say "play," what does that mean to you?) Well, to me, play also means learning, experimenting, exploring, imagination. (All right. How does your children usually play? Do you have some general description of how they play?) They love to do a lot of pretend play, so imaginary stuff with dolls and trucks and all of that. They pretend to be the different characters or they'll make up different scenes for the kids to play. And that's a lot of what they do. (So what do you think is the impact of that play on your child?) I think it helps them to explore different scenarios and also when something happens during the day, they can work that out while they play later on and go over it in their minds while they're playing. [female, 42]

## SUGGESTIONS FOR THE MUSEUM

Interviewees were asked if they had any suggestions for PTM. Data were analyzed *qualitatively*, and the findings are presented below.

While many said that they had no suggestions for the Museum, several interviewees said that they thought the Museum should fix the broken and poorly functioning exhibit elements, including the flight area, the crank, the feather, and other elements. Exhibit maintenance was the leading concern, but several others offered suggestions for the cafeteria, ranging from offering a wider array of options to less expensive prices. Several suggested that the Museum provide clearer distinctions between appropriate ages for exhibit elements, and several others said that they would like to see the Museum change its exhibit areas more frequently.

A few interviewees said they would like to see "more" of a variety of things, including more hands-on or creative elements, more things that parents could engage with, or more explanations or instructions for children (see the first and second quotations below). A couple said that a better children's sink in the bathrooms was needed, while others asked for more reliable parking options for members. Over ten idiosyncratic suggestions, ranging from a request for more cultural diversity in the exhibits to better exhibit height or building acoustics, were suggested by one interviewee each.

I guess I would [suggest adding] more stuff that you actually manipulate and create. . . . my nine-year-old son liked being on the plane. He liked building the planes, so I would say more stuff that you build and then interact with. [male, 40]

It would be neat if there were a way that adults could really engage in some of the stuff. It's more like get your kid to do the stuff. I don't have an answer, but it would be cool if their exhibits could be built so the adults could do it [so that] my daughter feels like I'm really playing a game against her and not just like babying her through it. [male, 32]

# PRINCIPAL FINDINGS: TIMING AND TRACKING OBSERVATIONS

## INTRODUCTION

This section presents findings from unobtrusive observations of children ages 3 to 10 who visited PTM between August and October 2009. Observations took place in three exhibition areas—Flight Fantasy, Rainforest Rhythm, and Water Works—identified by PTM staff as areas of interest. Additionally, observations captured the behaviors of observed children who entered a fourth area, Explorer’s Base Camp.<sup>28</sup> Data collectors observed a total of 168 children—55 in Flight Fantasy, 56 in Rainforest Rhythm, and 57 in Water Works—and noted children’s exhibit- and play-related behaviors as well as their social interactions.

## DATA COLLECTION CONDITIONS

More than one-half of observations took place on weekdays (57 percent), about one-third on weekend days (32 percent), and the remainder during Target First Wednesdays (11 percent) (see Table 36). About two-thirds took place in the afternoon (74 percent) and the level of crowding was few to moderate during most observations (90 percent). Compared with the other two exhibits, significantly more observations in Flight Fantasy took place when there was at least one unavailable exhibit (87 percent).

**TABLE 36**  
**DATA COLLECTION CONDITIONS**

	EXHIBITION AREA			TOTAL
	FLIGHT FANTASY	RAINFOREST RHYTHM	WATER WORKS	
<b>DAY OF THE WEEK (n = 168)</b>	%	%	%	%
Weekday	55	64	51	57
Weekend	31	32	33	32
Target First Wednesday	15	4	16	11
<b>TIME OF DAY (n = 168)</b>	%	%	%	%
Morning	20	21	9	17
Afternoon	71	75	75	74
Evening	9	4	16	10
<b>LEVEL OF CROWDING (n = 167)</b>	%	%	%	%
Few	50	52	47	50
Moderate	37	39	44	40
Crowded	13	9	9	10
<b>UNAVAILABLE EXHIBITS (n = 168)</b>	%	%	%	%
Yes <sup>1</sup>	87	39	5	44

<sup>1</sup> $\chi^2 = 77.210; df = 2; p = .000$

<sup>28</sup> Explorer’s Base Camp is located between Rainforest Rhythm and Water Works and staff deemed it an area of interest. Observations in Rainforest Rhythm and Water Works captured the behaviors of children who visited this area.



## VISITOR DESCRIPTIONS

This section describes demographic characteristics of the observed children and those in their visiting groups. No statistically significant differences in demographic characteristics were found among the three exhibition areas observed. Thus, findings for all three exhibition areas are presented together.

### OBSERVED CHILD

As shown in Table 37, the observed children include an equal number of females and males (50 percent each). The observed children range in age from 3 to 9 (the target age range was 3 to 10), with a median of 5.

**TABLE 37**  
**DEMOGRAPHIC CHARACTERISTICS OF OBSERVED CHILD**

<b>GENDER (n = 167)</b>	<b>%</b>
Female	50
Male	50
<b>AGE<sup>1</sup> (IN YEARS, n = 168)</b>	<b>%</b>
3 – 5	70
6 – 7	21
8 – 9	10

<sup>1</sup>Age: Range 3 – 9; Median = 5; Mean = 4.94 ( $\pm$  1.69 years); as the observed child exited the exhibition, the data collector asked the accompanying caregiver for the ages of all the children in the group and circled the age of the observed child.

### ADULTS AND CHILDREN ACCOMPANYING OBSERVED CHILD

All of the observed children visited PTM with one or more adults (median = 2 adults). Slightly less than one-half were accompanied by female adults only (45 percent) (see Table 38). About three-quarters of observed children were accompanied by one or more other children (71 percent) (median = 1 other child). One-half were accompanied by one or more children of the opposite gender (50 percent).

**TABLE 38**  
**GENDERS OF ADULTS AND CHILDREN ACCOMPANYING OBSERVED CHILD**

<b>ACCOMPANYING ADULTS (n = 168)</b>	<b>%</b>
Female adults only	45
Male and female adults	41
Male adults only	15
<b>ACCOMPANYING CHILDREN<sup>1</sup> (n = 120)</b>	<b>%</b>
Male and female children	50
Female children only	29
Male children only	21

<sup>1</sup>The gender composition of the child(ren) in the group includes the observed child's gender.

Slightly more than one-half of observed children were visiting with at least one middle-aged adult (35-54 years) and slightly less than one-half were visiting with at least one young adult (18-34 years) (55 percent and 48 percent, respectively) (see Table 39). A majority of observed children accompanied by other children were visiting with children up to 5 years old (86 percent) (median age of accompanying children = 3).

**TABLE 39**  
**AGES OF ADULTS AND CHILDREN ACCOMPANYING OBSERVED CHILD**

<b>AGES OF ACCOMPANYING ADULTS<sup>1/2</sup> (IN YEARS, n = 168)</b>	<b>%</b>
18 – 34	48
35 – 54	55
55 or older	16
<b>AGES OF ACCOMPANYING CHILDREN<sup>1/2</sup> (IN YEARS, n = 120)</b>	<b>%</b>
Up to 5	86
6 – 7	19
8 or older	13

<sup>1</sup>The total percentage exceeds 100 because observed children were accompanied by adults and children in multiple age categories.

<sup>2</sup>As the observed child exited the exhibition, the data collector asked the accompanying caregiver the ages of all adults and children in the group.

## VISITATION CHARACTERISTICS

This section describes visitation characteristics of the observed children and their visiting group. No statistically significant differences in visitation were found among the three exhibition areas observed. Thus, findings for all three exhibition areas are presented together.

More than one-half of groups were first-time PTM visitors (58 percent), more than one-third visited PTM when it was at its former location (38 percent), and about one-third are current PTM members (33 percent) (see Table 40). The total number of people in each observed child’s group (including the observed child) range from two to nine, with a median group size of four.

**TABLE 40****VISITATION CHARACTERISTICS<sup>1</sup>**

<b>VISIT TO PTM (n = 168)</b>	<b>%</b>
First-time to PTM	58
Repeat PTM visitor	42
<b>VISIT TO FORMER PTM (n = 168)</b>	<b>%</b>
Had not visited former PTM	62
Visited former PTM	38
<b>PTM MEMBER (n = 168)</b>	<b>%</b>
Non-member	67
Member	33
<b>GROUP SIZE<sup>2,3</sup> (n = 168)</b>	<b>%</b>
2 visitors	17
3 visitors	27
4 or more visitors	55

<sup>1</sup>As the observed child exited the exhibition, the data collector asked the accompanying caregiver for relevant visit information.

<sup>2</sup>Group size includes observed child.

<sup>3</sup>Group size ranged from 2-9 visitors; median = 4 visitors.

## OVERALL VISITATION PATTERNS

This section presents information about observed children's total time and stops in Flight Fantasy, Rainforest Rhythm, Water Works, and Explorer's Base Camp.

### TOTAL TIME SPENT IN THE EXHIBITION

Observed children's total time in the exhibition area observed (i.e., Flight Fantasy, Rainforest Rhythm, and Water Works) ranges from 15 seconds to 39 minutes and 37 seconds, with a median time of 5 minutes, 12 seconds (see Table 41). About one-half of observed children spent less than 5 minutes in the exhibition area observed (48 percent) while about another one-half spent between 5 and 20 minutes (46 percent).

**TABLE 41****TOTAL TIME SPENT IN EACH EXHIBITION**

TIME (MIN:SEC)	EXHIBITION AREA			
	FLIGHT FANTASY ( <i>n</i> = 55)	RAINFOREST RHYTHM ( <i>n</i> = 56)	WATER WORKS ( <i>n</i> = 55)	TOTAL ( <i>n</i> = 166)
	%	%	%	%
Less than 5:00	33	61	49	48
5:00 – 9:59	26	21	27	25
10:00 – 19:59	29	14	20	21
20:00 or more	13	4	4	7
SUMMARY STATISTICS	TIME	TIME	TIME	TIME
Range	30 sec. – 28 min., 37 sec.	15 sec. – 33 min., 23 sec.	20 sec. – 39 min., 37 sec.	15 sec. – 39 min., 37 sec.
Median time	8 min., 15 sec.	4 min., 15 sec.	5 min., 7 sec.	5 min., 12 sec.

Only those children observed in Rainforest Rhythm and Water Works could visit Explorer’s Base Camp. Of these 113 observed children, 17 visited Explorer’s Base Camp. Their total time spent ranged from 30 seconds to 7 minutes and 5 seconds, with a median time of 1 minute and 42 seconds (see Table 42). The majority spent less than 5 minutes (*n* = 13).

**TABLE 42****TIME SPENT IN EXPLORER’S BASE CAMP**

TIME (MIN:SEC) ( <i>n</i> = 17)	<i>n</i>
Less than 5:00	13
5:00 – 9:59	4
SUMMARY STATISTICS	TIME
Range	30 sec. – 7 min., 5 sec.
Median	1 min., 42 sec.

**FACTORS ASSOCIATED WITH TOTAL TIME SPENT IN THE EXHIBITION**

When total time spent in the exhibition area was tested against demographic and visit characteristics, two significant findings emerged:

- ♦ Children are more likely to stay longer in Flight Fantasy than in Rainforest Rhythm (see Table 43).
- ♦ Children who interact with or who are with an accompanying adult who interacts with PTM staff spend more time in exhibit areas than those who do not (see Table 44).

**TABLE 43**  
**TOTAL TIME SPENT BY EXHIBITION AREA**

	EXHIBITION AREA			
	FLIGHT FANTASY	RAINFOREST RHYTHM	WATER WORKS	TOTAL
TIME (n = 166)	MIN:SEC	MIN:SEC	MIN:SEC	MIN:SEC
Median <sup>1</sup>	8:15	4:15	5:7	5:12

<sup>1</sup> $\chi^2 = 9.546$ ;  $df = 2$ ;  $p = .008$  (Kruskal-Wallis test)

**TABLE 44**  
**TOTAL TIME SPENT BY STAFF INTERACTION**

	STAFF INTERACTION		
	YES	NO	TOTAL
TIME (n = 95)	MIN:SEC	MIN:SEC	MIN:SEC
Median <sup>1</sup>	11:51	5:23	7:17

<sup>1</sup> $\chi^2 = 11.088$ ;  $df = 1$ ;  $p = .001$  (Kruskal-Wallis test)

### TOTAL NUMBER OF EXHIBIT STOPS

The three exhibition areas observed have a different number of exhibits—Flight Fantasy has 14, Rainforest Rhythm has 12, and Water Works has 14.<sup>29</sup> About one-half of observed children stopped at between five and nine exhibits (51 percent), and slightly more than one-third stopped at between one and four exhibits (40 percent) (see Table 45). No statistically significant differences were found when the total number of exhibit stops was examined by demographic and visitation characteristics.

**TABLE 45**  
**TOTAL STOPS IN THE EXHIBITION AREA**

	EXHIBITION AREA			
	FLIGHT FANTASY (n = 55)	RAINFOREST RHYTHM (n = 56)	WATER WORKS (n = 55)	TOTAL (n = 166)
NUMBER OF EXHIBITS VISITED	%	%	%	%
1 – 4	46	38	36	40
5 – 9	46	59	49	51
10 or more	9	4	15	9
SUMMARY STATISTICS	NUMBER OF EXHIBITS	NUMBER OF EXHIBITS	NUMBER OF EXHIBITS	NUMBER OF EXHIBITS
Range	1 – 12	1 – 10	1 – 14	1 – 14
Median	6	5	6	6

<sup>29</sup>“Exhibit” is used to describe distinct areas or components of the exhibitions. For example, the toys (e.g., rubber ducks) in Water Works were considered an exhibit. The works of art, toy collections, and signage are treated separately in the section “Visitation to Shared Exhibit Types” since some areas had these components in common.

Explorer’s Base Camp had nine exhibits (see Appendix X for a complete list of exhibits).<sup>30</sup> Of the 17 observed children who visited Explorer’s Base Camp, about two-thirds stopped at between one and four exhibits ( $n = 11$ ) (see Table 46).

**TABLE 46**  
**TOTAL NUMBER OF STOPS IN EXPLORER’S BASE CAMP**

<b>NUMBER OF EXHIBITS VISITED (<math>n = 17</math>)</b>	<b><math>n</math></b>
1 – 4	11
5 – 9	6
<b>SUMMARY STATISTICS</b>	<b>NUMBER OF EXHIBITS</b>
Range	1 – 7
Median	3

### STOPS AT INDIVIDUAL EXHIBITS

This section describes stops at individual exhibits in all three exhibition areas observed—Flight Fantasy, Rainforest Rhythm, and Water Works—as well as those at Explorer’s Base Camp (an additional area included in Rainforest Rhythm and Water Works observations). When individual exhibits that 20 or more observed children stopped at were compared according to demographic and visit characteristics, no significant relationships emerged.

#### **FLIGHT FANTASY**

Slightly less than two-thirds of observed children in Flight Fantasy stopped at Pedal Boat (62 percent), Rocket Tunnel (60 percent), Feather Machines (58 percent), and Flying Machines (58 percent) (see Table 47). The lowest percentage of observed children stopped at Timer (22 percent) and Mobile Making (18 percent).

<sup>30</sup>“Exhibit” is used to describe distinct areas or components of the exhibitions. For example, the props in Explorer’s Base Camp were considered an exhibit.

**TABLE 47****PERCENTAGE OF CHILDREN WHO STOPPED AT FLIGHT FANTASY EXHIBITS<sup>1</sup>**

<b>EXHIBIT NAME</b>	<b>NUMBER OF CHILDREN WHO STOPPED (n = 55)</b>	<b>% OF CHILDREN WHO STOPPED</b>
Pedal Boat	34	62
Rocket Tunnel	33	60
Feather Machines	32	58
Flying Machine	32	58
Hamster Wheel	28	51
Balance Beam	26	47
Conveyor	22	40
Spiral Rocket	19	35
Row Boat	19	35
Cosmic Squid	17	31
Helicopter Ride	15	27
Cloud Hopscotch	15	27
Timer	12	22
Mobile Making	10	18

<sup>1</sup>Three Flight Fantasy exhibits were under construction during a percentage of the observations— Helicopter Ride (60 percent), Row Boat (27 percent), and Feather Machines (15 percent).

**RAINFOREST RHYTHM**

A majority of observed children in Rainforest Rhythm stopped at Vines and Chimes (80 percent), Elephant Conga (79 percent), and Marimbas (79 percent). The lowest percentage of children stopped at Books (4 percent) (see Table 48).

**TABLE 48****PERCENTAGE OF CHILDREN WHO STOPPED AT RAINFOREST RHYTHM EXHIBITS<sup>1</sup>**

<b>EXHIBIT NAME</b>	<b>NUMBER OF CHILDREN WHO STOPPED (n = 56)</b>	<b>% OF CHILDREN WHO STOPPED</b>
Vines and Chimes	45	80
Elephant Conga	44	79
Marimbas	44	79
Reed Organ	36	64
Canoe	30	54
Story Land Cottage	25	45
Whoopee Cushion Stumps	20	36
Spider-web Harp	13	23
Frog Log	12	21
Rain Stick Log	11	20
Snake	11	20
Books	2	4

<sup>1</sup>Two Rainforest Rhythm exhibits were under construction during a percentage of the observations— Frog Log (39 percent) and Elephant Conga (2 percent).

### WATER WORKS

A majority of observed children in Water Works used the Plastic Water Toys (84 percent) and about two-thirds stopped at Tug Boat (65 percent) (see Table 49). The lowest percentage of children stopped at Lighthouse (16 percent).

**TABLE 49**  
**PERCENTAGE OF CHILDREN WHO STOPPED AT WATER WORKS EXHIBITS<sup>1</sup>**

EXHIBIT NAME	NUMBER OF CHILDREN WHO STOPPED ( <i>n</i> = 57)	% OF CHILDREN WHO STOPPED
Plastic Water Toys	48	84
Tug Boat	37	65
Water Jets	31	54
Fans	30	53
Rapids	25	44
Locks	24	42
Wave Makers	21	37
Duck Pond	21	37
Water Wheel	18	32
Bubblers	15	26
Draw Bridge	14	25
Archimedes Screw	13	23
Race Rapids	13	23
Lighthouse	9	16

<sup>1</sup>Three Water Works exhibits were under construction during a percentage of the observations—Water Jets (2 percent), Tug Boat (2 percent), and Wave Makers (2 percent).

### EXPLORER'S BASE CAMP

Of the 113 observed children in Water Works and Rainforest Rhythm, 17 visited Explorer's Base Camp. About two-thirds of these observed children stopped at Eagle Viewer (65 percent) and about one-half stopped at Flag Pole (53 percent) and Kaleidoscope (47 percent) (see Table 50). The lowest percentage of children stopped at Props (12 percent).

**TABLE 50**  
**PERCENTAGE OF CHILDREN WHO STOPPED AT EXPLORER'S BASE CAMP EXHIBITS<sup>1</sup>**

EXHIBIT NAME	NUMBER OF CHILDREN WHO STOPPED ( <i>n</i> = 17)	% OF CHILDREN WHO STOPPED
Eagle Viewer	11	65
Flag Pole	9	53
Kaleidoscope	8	47
Periscope	7	41
World Clocks	6	35
Radio	6	35
Scent Station	4	24
Books	3	18
Props (vest)	2	12

<sup>1</sup>One Explorer's Base Camp exhibit was under construction during a percentage of the observations—Periscope (1 percent).



### VISITATION TO SHARED EXHIBIT TYPES

The three exhibition areas observed have at least one of the following three exhibit types—works of art, signage (i.e., Morris Column with museum map and “Today’s Events” and/or *Value of Play* signs), and/or toy collections.

About one-third of adults stopped at the toy collections (33 percent), while few to none stopped at the works of art (6 percent), *Value of Play* signs (1 percent), and Morris Column signage (0 percent) (see Table 51). Several observed children stopped at the toy collections on their own (18 percent), while a few stopped at works of art on their own (2 percent).<sup>31</sup>

**TABLE 51**  
**TOTAL STOPS BY SHARED EXHIBIT TYPE**

TYPE OF VISITOR WHO STOPPED	EXHIBIT TYPE			
	WORKS OF ART (n = 113)	MORRIS COLUMN (n = 112)	VALUE OF PLAY SIGNS (n = 111)	TOY COLLECTIONS (n = 168)
	%	%	%	%
Adult	6	0	1	33
Child	2	-- <sup>1</sup>	-- <sup>2</sup>	18

<sup>1</sup>Observations did not capture whether children looked at Morris Column signage since it is designed for adults

<sup>2</sup>Observations did not capture whether children looked at *Value of Play* signs since they are designed for adults.

### FACTORS ASSOCIATED WITH STOPS AT SHARED EXHIBIT TYPES

Whether an adult or child stopped at the various shared exhibit types was compared by demographic and visit characteristics. One significant finding emerged:

- ◆ Children are more likely to stop at toy collections on their own in Rainforest Rhythm than they are in Flight Fantasy or Water Works (see Table 52).

**TABLE 52**  
**CHILD STOPPED AT TOY COLLECTION ON THEIR OWN BY EXHIBITION AREA**

STOPPED AT TOY COLLECTION	EXHIBITION AREA			
	FLIGHT FANTASY (n = 55)	RAINFOREST RHYTHM (n = 56)	WATER WORKS (n = 57)	TOTAL (n = 168)
	%	%	%	%
Yes <sup>1</sup>	20	30	4	18
No	80	70	97	82

<sup>1</sup> $\chi^2 = 14.138$ ;  $df = 2$ ;  $p = .001$

<sup>31</sup> Information about behaviors associated with shared exhibit types are presented in the last section, “Visitor Behaviors.”

## VISITOR BEHAVIORS

This section described how observed children experienced exhibits in the exhibition area, including how they interacted with accompanying adults and other children. See Appendices R-U for the frequency of behaviors by individual exhibits and Appendices V-Z for definitions of each visitor behavior.

### EXHIBIT- AND PLAY-RELATED BEHAVIORS

Table 53 summarizes the incidence of exhibit- and play-related behaviors—any behaviors associated with observed children’s use of and engagement with exhibits. The table is sorted in descending order according to the total percentage. Nearly all observed children initiated exhibit use at least once during observations (97 percent), and a majority used exhibits as intended at least once during observations (86 percent).

**TABLE 53**  
**OBSERVED CHILD’S EXHIBIT- AND PLAY-RELATED BEHAVIORS**

BEHAVIOR <sup>1</sup>	EXHIBITION AREA			
	FLIGHT FANTASY (n = 55)	RAINFOREST RHYTHM (n = 56)	WATER WORKS (n = 57)	TOTAL (n = 168)
	%	%	%	%
Child initiated exhibit use	96	98	97	97
Child used exhibit as intended	96	100	63	86
Child engaged in exhibit misuse	62	61	42	55
Child used exhibit appropriately <sup>2</sup>	42	21	95	53
Child engaged in aggressive play	15	25	12	17
Child tried to use broken component	33	9	2	14

<sup>1</sup>The total percentage exceeds 100 because observed children exhibited multiple behaviors over the observation period.

<sup>2</sup>In addition to defining an exhibit’s intended use, staff defined unintended, appropriate ways that a child might engage with each exhibit. For example, a child might role/pretend play at an exhibit intended to encourage testing/cause-effect. See Appendices V-Z for a detailed description of appropriate play at each exhibit and Appendices R-U for the frequency of different types of appropriate play at each exhibit.

### FACTORS ASSOCIATED WITH EXHIBIT- AND PLAY-RELATED BEHAVIORS

Exhibit- and play-related behaviors were compared by demographic and visit characteristics. Several significant findings emerged.

#### DIFFERENCES BY EXHIBITION AREA (SEE TABLE 54)

- ◆ Children are more likely to use exhibits as intended in Flight Fantasy and Rainforest Rhythm than in Water Works.
- ◆ Children are more likely to engage in unintended, appropriate testing/cause-effect in Water Works than in Flight Fantasy and Rainforest Rhythm.
- ◆ Children are more likely to engage in unintended, appropriate role/pretend play in Water Works than in Flight Fantasy and Rainforest Rhythm.
- ◆ Children are more likely to engage in unintended, appropriate play in Water Works than in Flight Fantasy and Rainforest Rhythm.

**DIFFERENCES BY GENDER (SEE TABLE 55)**

- ◆ Males are more likely to use exhibits as intended than are females.
- ◆ Males are more likely to engage in aggressive play than are females.

**TABLE 54**  
**EXHIBIT- AND PLAY-RELATED BEHAVIORS BY EXHIBITION AREA**

	EXHIBITION AREA			TOTAL (n = 168)
	FLIGHT FANTASY (n = 55)	RAINFOREST RHYTHM (n = 56)	WATER WORKS (n = 57)	
<b>USED EXHIBIT AS INTENDED</b>	%	%	%	%
Yes <sup>1</sup>	96	100	63	86
No	4	0	37	14
<b>ENGAGED IN TESTING/CAUSE-EFFECT</b>	%	%	%	%
Yes <sup>2</sup>	7	--	58	--
No	93	--	42	--
<b>ENGAGED IN ROLE/PRETEND PLAY</b>	%	%	%	%
Yes <sup>3</sup>	29	21	51	34
No	71	79	49	66
<b>USED EXHIBIT APPROPRIATELY</b>	%	%	%	%
Yes <sup>4</sup>	42	21	95	53
No	58	79	5	47

<sup>1</sup> $\chi^2 = 39.444$ ;  $df = 2$ ;  $p = .000$     <sup>3</sup> $\chi^2 = 11.782$ ;  $df = 2$ ;  $p = .003$   
<sup>2</sup> $\chi^2 = 32.424$ ;  $df = 1$ ;  $p = .000$     <sup>4</sup> $\chi^2 = 65.025$ ;  $df = 2$ ;  $p = .000$

**TABLE 55**  
**EXHIBIT- AND PLAY-RELATED BEHAVIORS BY GENDER OF OBSERVED CHILD**

	GENDER		TOTAL (n = 167)
	MALE (n = 83)	FEMALE (n = 84)	
<b>USED EXHIBIT AS INTENDED</b>	%	%	%
Yes <sup>1</sup>	94	79	86
No	6	21	14
<b>ENGAGED IN AGGRESSIVE PLAY</b>	%	%	%
Yes <sup>2</sup>	25	10	17
No	75	91	83

<sup>1</sup> $\chi^2 = 8.342$ ;  $df = 1$ ;  $p = .004$   
<sup>2</sup> $\chi^2 = 7.242$ ;  $df = 1$ ;  $p = .007$

**STAFF INTERACTIONS**

Table 56 summarizes exhibit staff's interaction with observed children and their visiting group. About one-quarter of observed children interacted with staff in the exhibition area observed (26 percent). However, this varied widely by exhibition area—more than one-third of observed children or their visiting group interacted with staff in Flight Fantasy (40 percent), few interacted with staff in Water

Works (9 percent), and one interacted with staff in Rainforest Rhythm. Overall, the most frequent staff interaction was providing information about how to use an exhibit (17 percent).

**TABLE 56**  
**STAFF INTERACTIONS**

BEHAVIOR <sup>1</sup>	EXHIBITION AREA			
	FLIGHT FANTASY (n = 50)	RAINFOREST RHYTHM (n = 1)	WATER WORKS (n = 45)	TOTAL (n = 96)
	%	n	%	%
Staff present, interacted with group	40	1	9	26
Staff told group how to use an exhibit	28	1	2	17
Staff provided logistics/visit information	6	0	7	6
Staff modeled exhibit use for group	6	1	2	5
Staff modeled how to “play” for group	4	0	0	2

No significant differences were found when staff interaction was compared by demographic and visit characteristics.

### CHILD-CHILD INTERACTIONS

Table 57 summarizes observed children’s interaction with other children. Of those children visiting with other children, less than two-thirds played with a child in their own group (60 percent). When other children were present in the exhibition, more than one-third of observed children actively watched them play (41 percent), and about one-quarter played with them (27 percent).

**TABLE 57**  
**SPECIFIC CHILD-CHILD INTERACTIONS**

BEHAVIOR <sup>1</sup>	EXHIBITION AREA							
	FLIGHT FANTASY		RAINFOREST RHYTHM		WATER WORKS		TOTAL	
	n	%	n	%	n	%	n	%
Child played with child in own group	37	57	43	77	40	45	120	60
Child actively watched another child play	54	69	54	19	56	36	164	41
Child played with child in another group	47	28	42	29	54	24	143	27

<sup>1</sup>The total percentage exceeds 100 because observed children exhibited multiple behaviors during observations.

### FACTORS ASSOCIATED WITH CHILD-CHILD INTERACTIONS

Child-child interactions were compared by demographic and visit characteristics. One significant finding emerged.

- ◆ Children are more likely to actively watch another child play in Flight Fantasy than in Rainforest Rhythm or Water Works (see Table 58).

**TABLE 58**  
**CHILD-CHILD INTERACTIONS BY EXHIBITION AREA**

	EXHIBITION AREA			
	FLIGHT FANTASY (n = 54)	RAINFOREST RHYTHM (n = 54)	WATER WORKS (n = 56)	TOTAL (n = 164)
<b>ACTIVELY WATCHED ANOTHER CHILD PLAY</b>	%	%	%	%
Yes <sup>1</sup>	69	19	36	41
No	32	82	64	59

<sup>1</sup> $\chi^2 = 28.864$ ;  $df = 2$ ;  $p = .000$

### ADULT-CHILD INTERACTIONS

Table 59 summarizes the incidence of specific adult-child interactions. The table is sorted in descending order according to the total percentage. More than one-third of adults provided their child with information or instruction (39 percent), played with their child (37 percent), and/or modeled how to use an exhibit (35 percent) at least once during the observation. Few adults got down on their child’s level (8 percent) and/or engaged in playful behavior (7 percent).

**TABLE 59**  
**SPECIFIC ADULT-CHILD INTERACTIONS**

BEHAVIOR <sup>1</sup>	EXHIBITION AREA			
	FLIGHT FANTASY (n = 55)	RAINFOREST RHYTHM (n = 56)	WATER WORKS (n = 57)	TOTAL (n = 168)
Adult provided info/instruction	64	20	35	39
Adult and child play together	42	46	23	37
Adult modeled how to use an exhibit	27	38	39	35
Adult redirected child to another exhibit	49	20	26	32
Adult provided physical assistance	51	13	30	31
Child actively watched an adult play	11	9	26	16
Adult got down on child’s level	15	9	2	8
Adult engaged in playful behavior	2	14	4	7

<sup>1</sup>The total percentage exceeds 100 because adults accompanying observed children exhibited multiple behaviors during observations.

### FACTORS ASSOCIATED WITH ADULT-CHILD INTERACTIONS

Adult-child interactions were compared by demographic and visit characteristics. Several significant findings emerged.

#### DIFFERENCES BY EXHIBITION AREA (SEE TABLE 60)

- ◆ Accompanying adults are more likely to provide physical assistance to their children in Flight Fantasy than in Rainforest Rhythm or Water Works.
- ◆ Accompanying adults are more likely to provide information or instruction to their children in Flight Fantasy than in Rainforest Rhythm or Water Works.

- ◆ Accompanying adults are more likely to redirect their children to another exhibit in Flight Fantasy than in Rainforest Rhythm or Water Works.

**DIFFERENCES BY OBSERVED CHILD'S AGE (SEE TABLE 61)**

- ◆ Accompanying adults are more likely to provide physical assistance to children 3 to 5 years than they are to children 6 to 9 years.
- ◆ Accompanying adults are more likely to model how to use an exhibit for children 3 to 5 years than they are to children 6 to 9 years.

**DIFFERENCES BY THE GENDER COMPOSITION OF ACCOMPANYING ADULTS (SEE TABLE 62)**

- ◆ Accompanying adult groups with males and females and males only are more likely than are female only groups to interact with their child.
- ◆ Accompanying adult groups with males and females are more likely than are male only or female only groups to model how to use an exhibit for their child.
- ◆ Accompanying adult groups with males and females are more likely than are male only or female only groups to play with their child.

**TABLE 60  
ADULT-CHILD INTERACTIONS BY EXHIBITION AREA**

	EXHIBITION AREA			
	FLIGHT FANTASY (n = 55)	RAINFOREST RHYTHM (n = 56)	WATER WORKS (n = 57)	TOTAL (n = 168)
<b>PROVIDED PHYSICAL ASSISTANCE</b>	%	%	%	%
Yes <sup>1</sup>	51	13	30	31
No	49	88	70	69
<b>PROVIDED INFO/INSTRUCTION</b>	%	%	%	%
Yes <sup>2</sup>	64	20	35	39
No	36	80	65	61
<b>REDIRECTED CHILD TO ANOTHER EXHIBIT</b>	%	%	%	%
Yes <sup>3</sup>	49	20	26	32
No	51	80	74	69

<sup>1</sup> $\chi^2 = 19.205; df = 2; p = .000$     <sup>3</sup> $\chi^2 = 12.236; df = 2; p = .002$   
<sup>2</sup> $\chi^2 = 23.153; df = 2; p = .000$

**TABLE 61****ADULT-CHILD INTERACTIONS BY AGE OF OBSERVED CHILD**

	AGE		
	3-5 YEARS	6-9 YEARS	TOTAL
<b>PROVIDED PHYSICAL ASSISTANCE</b>	%	%	%
Yes <sup>1</sup>	39	12	31
No	61	88	69
<b>MODELED HOW TO USE AN EXHIBIT</b>	%	%	%
Yes <sup>2</sup>	42	18	35
No	58	82	66

<sup>1</sup> $\chi^2 = 12.615$ ;  $df = 1$ ;  $p = .000$ <sup>2</sup> $\chi^2 = 9.227$ ;  $df = 1$ ;  $p = .002$ **TABLE 62****ADULT-CHILD INTERACTIONS BY GENDER OF ACCOMPANYING ADULTS**

	GENDER COMPOSITION OF ADULTS			
	MALE ADULTS ONLY ( $n = 25$ )	FEMALE ADULTS ONLY ( $n = 75$ )	BOTH MALE AND FEMALE ADULTS ( $n = 68$ )	TOTAL ( $n = 168$ )
<b>INTERACTED WITH CHILD</b>	%	%	%	%
Yes <sup>1</sup>	80	65	87	76
No	20	35	13	24
<b>MODELED HOW TO USE AN EXHIBIT</b>	%	%	%	%
Yes <sup>1</sup>	40	20	49	35
No	60	80	52	66
<b>PLAYED WITH CHILD</b>	%	%	%	%
Yes <sup>2</sup>	44	21	52	37
No	56	79	49	63

<sup>1</sup> $\chi^2 = 9.265$ ;  $df = 2$ ;  $p = .01$ <sup>2</sup> $\chi^2 = 13.231$ ;  $df = 2$ ;  $p = .001$ <sup>3</sup> $\chi^2 = 14.546$ ;  $df = 2$ ;  $p = .001$ **BEHAVIORS AT SHARED EXHIBIT TYPES**

Table 63 summarizes the incidence of behaviors at shared exhibit types (i.e., toy collections, works of art, and exhibit signage). Accompanying adults exhibited behaviors at toy collections—20 percent looked at the toy collection label and/or display, while 9 percent discussed the toy collection display. Few to none exhibited behaviors at works of art and *Value of Play* signs.

**TABLE 63**

**BEHAVIORS AT SHARED EXHIBIT TYPES<sup>1</sup>**

	EXHIBITION AREA			TOTAL
	FLIGHT FANTASY (n = 55)	RAINFOREST RHYTHM (n = 56)	WATER WORKS (n = 57)	
<b>BEHAVIORS AT TOY COLLECTIONS (n = 168)</b>	%	%	%	%
Adult looked at labels/display with child	24	20	7	17
Adult looked at labels/display without child	0	7	2	3
Adult discussed display with child	13	9	2	8
Adult discussed display without child	0	2	0	1
<b>BEHAVIORS AT WORKS OF ART (n = 113)</b>	%	%	%	%
Adult looked at works of art with child	-- <sup>1</sup>	7	0	--
Adult looked at works of art without child	--	0	0	--
Adult discussed works of art with child	--	7	0	--
Adult discussed works of art without child	--	2	0	--
<b>BEHAVIORS AT VALUE OF PLAY SIGNS (n = 111)</b>	%	%	%	%
Adult discussed signs with staff	0	0	-- <sup>2</sup>	--
Adult discussed signs with another adult	0	0	--	--

<sup>1</sup>Flight Fantasy had one work of art, Cosmic Squid, which was considered an exhibit.

<sup>2</sup>The *Value of Play* sign in *Nature's Pond* (the toddler area) was not part of the observation.

No significant differences were found when behaviors at shared exhibit types were compared by demographic and visit characteristics.



# PRINCIPAL FINDINGS: FOCUSED OBSERVATIONS

## INTRODUCTION

*Nature's Pond* is one of three toddler areas in PTM; toddler areas are designed for children 3 years and younger. To provide a detailed account of how visiting groups were using *Nature's Pond*, RK&A conducted two observations of the exhibition area of two hours each, taking detailed notes of exhibit- and play-related behaviors, as well as social interactions between children and adults. RK&A also noted children's genders, approximate ages, and group number and composition (when possible).

RK&A observed 120 groups comprised of 163 children and their caregivers; one observation took place in the morning under low to moderate crowding conditions and the other took place in the afternoon under crowded conditions. About two-thirds of children were visiting without another child and there were slightly more males than females observed. Children's approximate ages ranged from a few months to 14 years (although most children older than 10 were supervising other children).

## EXHIBIT- AND PLAY-RELATED BEHAVIORS

- ◆ Nearly all children initiated exhibit use; occasionally, parents initiated exhibit use and most often at the Hollow Trees, Swan's Nest, and Infant Busy Box. Parents most often initiated exhibit use by asking the child to pose for a picture (e.g., on the swan) and/or asked a question to encourage interest in an exhibit (e.g., "Look! What kind of bird is that?")
- ◆ Most children used exhibits as intended during their time in *Nature's Pond*; children engaged in sensory exploration (e.g., touching the bark of the tree), motor skill development (e.g., moving eggs from one tree hole to another), physical activity (e.g., jumping on the lily pads or sliding down the slide), role/pretend play (e.g., feeding eggs to the swan), and building/design (e.g., building a fire from the provided sticks).
- ◆ Children rarely misused exhibits, with the exception of the Imbedded Cat Lilies, Riverbank Slide, and Swan's Nest. Some children (toddlers and older children) climbed and hung on the cat lilies, while others ran backwards up the slide past other children in line. A few children threw eggs at the swan or climbed on the wall surrounding the exhibit area.
- ◆ While aggressive play was rare overall, when children ages 4 and older were present in the exhibition area, aggressive play occurred at the Riverbank Slide and Play Pond. Older children knocked or pushed younger children (0 to 3 years) out of the way when jumping on the lily pads or sliding down the slide. Some parents hung back while children worked things out, while others removed their younger children from the exhibit or disciplined their older children (e.g., "share!" or "wait your turn").

## CHILD-CHILD INTERACTIONS

- ◆ While about two-thirds of children were visiting the exhibit without other children, most of the remaining one-third played with the children in their own group at exhibits. These interactions occurred most often at the Hollow Trees, Swan's Nest, and Play Pond; children jumped together from one lily pad to another (one child often following another child's lead), collaboratively built

fires from sticks at the Hollow Tree exhibit, or moved another child's eggs around from one location to another at the Swan's Nest exhibit.

- ◆ A few children from different groups played together; again, this occurred most often at the Hollow Trees, Swan's Nest, and Play Pond although many also played parallel to one another at the Infant Busy Box exhibit. However, more often, children waited for children from other groups to leave an area so they could begin playing with the exhibit.
- ◆ Some children actively watched other children play, most often at the Infant Busy Box and Play Pond exhibits; for example, children watched other children move the caterpillar at the Infant Busy Box exhibit around and copied these actions once that child had left the area. Many children also observed others as they jumped or played on the lily pads, coordinating their movements in the same way (e.g., hopping on one leg or pretending to swim).

## ADULT-CHILD INTERACTIONS

Some parents interacted with children, while others sat on nearby exhibits (e.g., tree stump next to the slide) and watched their children play. Adult-child interaction was observed as follows:

- ◆ Many adults provided information or instruction to their children while in *Nature's Pond*; some disciplined children, asking them to put loose items back where they belong (e.g., eggs) or asked them to wait their turn at an exhibit such as Riverbank Slide. Others provided verbal encouragement or direction/facilitation such as "Good job!" or "Look, there's another egg!" A few explained how to use an exhibit (e.g., "You have to go this way up the stairs" when their child started to climb back up the slide).
- ◆ Several adults provided children with physical assistance at Swan's Nest, Play Pond, and Riverbank Slide; not surprisingly, adults provided the most physical assistance to children ages 3 and younger, such as placing or pushing them down the slide or holding their hand as they jumped on the lily pads. Adults also retrieved eggs or other loose objects when they got stuck in tree holes.
- ◆ Several adults modeled exhibit use for their children; modeling occurred most often at Swan's Nest, Hollow Trees, and Infant Busy Box. Sometimes adults explicitly modeled exhibit use (e.g., "Look, the eggs go in here" while placing the eggs in the pouches surrounding the swan), while other times adults moved items at the sensory station (e.g., the butterfly's wings or caterpillar), stood back, and waited for their children to mimic the movement. A few adults also modeled how the lily pads made noise by pushing on them and saying "Listen, did you hear that?"
- ◆ Several adults redirected their children to other exhibits when: (1) an older child (4 and older) began using an exhibit and their younger child was in danger of being pushed; or (2) to call their child's attention to another exhibit of interest (e.g., one where they could take a picture, such as the Swan's Nest).
- ◆ A few adults with young children (up to 3 years) played with their children, helping them build a fire, place eggs in the pockets around the swan or in tree holes, and navigate the slide. Most of these adults got down on their child's level, and a couple engaged in playful behavior, making animal noises (e.g., "quack, quack!") or playing peek-a-boo at the tree stump next to the Riverbank Slide.

## STAFF INTERACTION

- ◆ Staff interaction was rare; the few times staff interacted with visitors was to make a general announcement that *Nature's Pond* was for children ages 3 and younger or to discipline individual children when they climbed on the exhibit wall or played aggressively on the slide.

## VALUE OF PLAYSIGNAGE

- ◆ One grandparent was observed reading the *Value of Play* sign during observations.

# PRINCIPAL FINDINGS: CENTENNIAL INTERVIEWS

## INTRODUCTION

RK&A interviewed 42 adults (18 years or older visiting with a child 18 or younger)—one-half in the summer and one-half in the fall—upon exiting the Centennial exhibition.<sup>32</sup> Interviewees were primarily female (two-thirds) and White/Caucasian (three-quarters). The median age of interviewees is 40. Two-thirds were repeat visitors to PTM, and more than one-half are members. Most interviewees were visiting with one or two children, and most identified themselves as either the parent/guardian or grandparent/aunt/uncle of the children with which they were visiting.

## INITIAL THOUGHTS

### REASONS FOR ENTERING THE EXHIBITION

When asked why they decided to visit the exhibition, one-third of interviewees said they entered the space because of the trains; these interviewees said the child they were with (often their son/grandson) liked trains (see the quotations below).

(So what made you decide to enter this part of the Museum?) I actually followed him and he always ends up here; he loves the trains. [female, 58]

(So what made you decide to enter this part of the Museum?) Well, the boys are definitely interested in trains. . . . We thought this could be the perfect place to check these things out, basically. [female, 31]

Nearly another one-third said that they wanted to see everything at PTM. Almost all of these were first-time visitors.

A few interviewees—mostly male—said that they entered the exhibition because they like history, with a couple noting their specific interest in the Centennial (see the quotation below).

(So what made you decide to enter this part of the Museum?) Quiet. But honestly, I'm a history buff. I love that thing in the middle [the model]; it's great. [male, 33]

The remaining interviewees had miscellaneous reasons for entering the exhibition, such as: following their children, seeking a calm space for themselves or their children, boredom with other exhibitions, and previous visits to the exhibition.

## OVERALL THOUGHTS

The interviewer asked interviewees to provide their initial thoughts about the exhibition. Nearly one-half gave cursory but positive responses saying things like “fantastic,” “impressive,” and “nicely done.”

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<sup>32</sup> There did not seem to be seasonal differences between visitors in regard to their thoughts about the Centennial exhibition.

One-quarter talked about the history presented in the exhibition; while only one person used the word “Centennial,” several were interested to learn about Philadelphia history and about what Fairmount Park looked like long ago (see the quotations below).

I think it [the Centennial exhibition] is pretty nice; I like the educational part of it, that you can see the history of Philadelphia and Fairmount Park. I really enjoyed it. I think she [my child] did as well. [female, 22]

It [the Centennial exhibition] was really neat. I know this is the Centennial Building, so it’s cool to see some of our history. It’s not as kid-friendly necessarily, not as interactive as some of the other exhibits, but it was fun. [It provides] a good history. [female, 20]

Additionally, a few interviewees said they did not find the space “kid-friendly” or at least not as kid-friendly as they found the rest of the Museum (see the first quotation below). While interviewees did not give explicit explanations as to why, some alluded to the type of exhibits presented (see the second quotation).

It [the Centennial exhibition] is nice, but it was not as interesting as other parts for the kids. We were looking at the model, but I don’t think my son was interested in it. [female, 30]

Oh, it’s beautiful. There’s not much for the children. I was glad there were some things for the children so I could look at the historical things that were very interesting to me. [female, 58]

In contrast, a few interviewees said their kids enjoyed the gallery and talked about the exhibits their children liked best, which included the train set and the Froebel blocks—hands-on and child-sized exhibits.

Other miscellaneous responses included references to the space as a “getaway” in PTM, “amazing resource” unknown to many, “boring,” and too young for the children with which they were visiting (see the quotation below).

We like it [the Centennial exhibition] a lot. It’s a nice little getaway from the other parts of the Museum. It’s a big, open space and less attended, so it’s an interesting little getaway. [male, 40]

## PERCEPTIONS OF THE EXHIBITION

### MAIN MESSAGE

Interviewees were asked to identify what they thought the exhibition was about. Responses were nuanced and are reported from those most descriptive and accurate to those least descriptive and accurate.

One-quarter of interviewees—all 40 years and older—identified the Centennial exhibition specifically, using the term “Centennial.” These interviewees said that the exhibition commemorates the Centennial and teaches visitors why the building was constructed.

(So what would you say the space is about or trying to show visitors other than what you mentioned?) Well, it was what Fairmount Park looked like—the Centennial and a little bit of a glimpse of the world in 1876. [male, 51]

More than one-quarter of the interviewees said that the exhibition explains the history of the building; these interviewees did not identify the “Centennial,” but rather spoke generally about the building’s location and importance to history (see the first quotation below). These visitors also did not refer to a “fair” although they sometimes referred to “Memorial Hall” (see the second quotation).

(What would you say this space is trying to show visitors?) Probably just trying to give the history of the building and talk about the period in time that all this was formed. [female, 20]

(What would you say this space is trying to show visitors?) Just the history of what was here in Memorial Hall and Philadelphia and what this whole area—Fairmount Park—is about. Things like that. [female, 22]

A few interviewees said the exhibition is about the history of Philadelphia, and one of these spoke specifically about Fairmount Park. These interviewees did not articulate any connection between the building and the Centennial, and their responses were vague (see the quotation below).

(Why do you think the Museum has this space?) Probably because we are in Philadelphia and they want to show the history of Philadelphia. [female, 30]

Several interviewees said the exhibition was about “history” in general. They did not expound or provide any specifications as to whose history.

Several interviewees said the exhibition was about transportation. A few specified that the exhibition was about trains and a couple specified that it was about transportation in Philadelphia (see the quotations below). These interviewees had entered the space because of the train set.

(Why do you think the Museum has this space in the building?) I would think that trains were an integral part of how our nation began, so it’s important that kids learn that, even if they don’t use trains today. [female, 35]

(What would you say this space is trying to show visitors?) It [the exhibition] starts from how the trains actually started in the city itself and it kind of gives a periodic time track from how it evolved. Even for the little kids, it’s really historical. [male, 30]

## RELATIONSHIP OF THE EXHIBITION TO THE WHOLE MUSEUM

Interviewees were asked to comment on how the exhibition compared to the rest of PTM and, further, how it fit in with the rest of PTM. More than one-half of interviewees said—either implicitly or explicitly—that the exhibition was directed at adults (see the quotations below). These interviewees said they felt this way because the exhibition focused on history and it was less “hands-on” compared with the rest of PTM.

(How does this exhibition compare with the rest of the experiences in the Museum today?) Good; it was great. It’s something for me to do. [male, 33]

They [children] are just excited about moving and touching and grabbing and seeing the other kids interact with things. And, there’s just not much of that happening in there [the Centennial exhibition]. But as an adult, I think it’s kind of interesting. [female, 32]

The remaining respondents indicated that the exhibition was for children, or at least, they *did not* indicate that it was for adults (see the quotations below). Several of these interviewees described the exhibition

as more educational and focused on history than the rest of PTM. A few described it as less hands-on, and a few said the exhibition was quieter than other exhibitions. A couple respondents did not indicate any differences between the Centennial exhibition and the rest of PTM.

It's on par [with the exhibitions in the rest of PTM]. You know, [it is] less interactive, but I don't think it's really meant to be as interactive as everything else. [male, 43]

I don't know if it's exactly the same thing or it's a little different, but they still have some of the things for the kids. It fits in, yeah. [female, 30]

It was different because I'm used to the water table and Alice in Wonderland and trying to make her happy. And, this was just nice and quiet, and she still enjoyed it; we had to pull her out from the train set. [female, 31]

## CENTENNIAL EXHIBITS

### HOW EXHIBITS APPEALED TO ADULTS

Interviewees were shown images of exhibits in the Centennial exhibition and asked to identify exhibits that were most and least appealing *to them* and why.

#### **MOST APPEALING**

More than one-half of interviewees said the model appealed most to them. A few interviewees each mentioned the kindergarten exhibit, the diorama, the stereoscope activity, the telephone exhibit, the train set, the Froebel blocks, exhibits with other information about the Fair, the exhibit on food at the Fair, and the typewriter exhibit.

Overall, interviewees said these exhibits were most appealing because they conveyed new information. Interviewees said they enjoyed the model because it was visually appealing, “detailed,” and “impressive.” These interviewees were impressed with the object itself, and one interviewee proclaimed it a work of art (see the quotation below).

It [the model] is very visceral. It's amazingly detailed. It's actually a work of art in my opinion. People have gone to such lengths to depict the World's Fair and it really is gorgeous. [male, 43]

#### **LEAST APPEALING**

Almost one-fifth of interviewees said that nothing appealed to them least or said that they did not have enough time on their own to determine the exhibits they liked least (i.e., they were facilitating an experience for the children they were with) (see the quotation below). All other responses varied greatly and no one exhibit was named by more than a few interviewees. From most- to least-frequently mentioned, those specific exhibits are: the dollhouse, the typewriter exhibit, the kindergarten exhibit, the telephone exhibit, the train set, the exhibit on food at the Fair, the diorama, exhibits with other information about the Fair, cases filled with artifacts, the stereoscope activity, and the model. A few responses were miscellaneous.

If I were by myself, this would be a totally different story. But with three little kids, probably just information about the fair [was least appealing]. But, like I said, I would enjoy that if I came by myself. [female, 31]

Most often, interviewees said the exhibit did not appeal to the children they were with, and thus, did not appeal to them either. Some people also mentioned familiarity with an object or topic and pure disinterest.

## HOW EXHIBITS APPEALED TO CHILDREN

Interviewees were also asked to identify exhibits that were most and least appealing *to the children with whom they were visiting* as well as explain why they thought their children liked or disliked the exhibits.

### MOST APPEALING

Almost one-half of interviewees named the train set, and about one-quarter named the Froebel blocks as most appealing. A few interviewees each named the dollhouse, the exhibit on food at the Fair, the telephone exhibit, the kindergarten exhibit, the model, the stereoscope activity, and the typewriter exhibit. A few interviewees said that there was nothing that most appealed to their children, and a couple said everything appealed to their children.

Many interviewees could not explain why these exhibits appealed to their children most; often, interviewees said that a particular exhibit was something the children went to or used, so they know it appealed to children. Other explanations include that the exhibits are “hands-on” or “interactive,” child-sized, and familiar (e.g., children have a similar train set at home).

### LEAST APPEALING

There was little consensus as to which exhibits were least appealing to the children with whom interviewees were visiting. Almost one-quarter of interviewees mentioned the model. A few said they were unsure which exhibits their children liked least, and a few said nothing appealed to their children least. A few each mentioned the dollhouse, exhibits with other information about the Fair, cases filled with artifacts, the telephone exhibit, the typewriter exhibit, and the train set. A couple each mentioned the kindergarten exhibit and the Froebel blocks, and one interviewee each mentioned the stereoscope activity and the diorama.

Most interviewees said these exhibits were least appealing to the children they were with because they were not “hands-on.” Further, a few said the content was above their children’s comprehension. A couple mentioned that the exhibits—specifically the model—was not properly sized for children.

## EXHIBITION CONTENT

### PRIOR KNOWLEDGE OF THE CENTENNIAL

Two-thirds of interviewees knew little to nothing about the Centennial of 1876 before visiting the exhibition. A few visitors knew something about the Centennial, and even fewer knew a lot about the exhibition.

### UNDERSTANDING OF THE CENTENNIAL

Interviewees were asked several questions to gauge how the exhibit informed their understanding of the Centennial exhibition. Almost three-quarters of visitors said they learned something new about the Centennial. About one-quarter had not previously known that the Centennial took place—all of whom said they knew nothing about the Centennial previously (see the first quotation below). A few others said they learned about the large scope of the Centennial (see the second quotation). A few others named other details about the Centennial including the layout of the Centennial and buildings constructed, and other miscellaneous facts (see the third quotation).



I didn't know anything about it [the Centennial], so everything was informative. [female, 37]

The scale, the scope of what it [the Centennial] entails, how everything that had gone on with Machinery Hall and the scope of that—it's just an amazing fact to me. [male, 43]

Well, as I say, I hadn't realized about the state exhibits. I don't really know how else it changed anything partly because I say I've read about it. [male, 71]

Several interviewees provided general responses from which it was not possible to determine whether they learned anything new about the Centennial. For example, see the quotations below.

I guess just getting a little more history behind it. The explanations of everything were very good. Informative. [female, 20]

It looks like Philadelphia was a very successful, prosperous place. [male, 65]

A few interviewees said they did not learn anything new about the Centennial. A couple of these interviewees had come to the exhibition knowing a lot about the Centennial. A few interviewees did not know that the exhibit was about the Centennial exhibition. They only came to this realization through the interview (see the first quotation below). A few indicated or implied that they were busy with their children, so they had not taken a good survey of the exhibition (see the second quotation).

Actually, you know what? I didn't read about the Fair. I just thought it was old Philadelphia; I didn't know much about the Fair, so only now I am realizing about the Fair. [female, 30]

Now I'm understanding what the whole room is—now that you're talking to me. But before, I didn't have enough time to actually sit and read, so [I did] not [learn] a lot [about the Centennial]. But, had I been here by myself, maybe; I mean, I'm sure I would have [learned something about the Centennial]. [female, 23]

## TEACHING HISTORY TO CHILDREN

This section discusses interviewees' feelings about teaching history to children. The term "children" was left undefined, so each interviewee had his/her own definition. Often, interviewees referred to the ages of the children with whom they were visiting when answering questions related to this subject.

### FEELINGS ABOUT TEACHING HISTORY TO CHILDREN

More than three-quarters of interviewees responded positively to the idea of teaching history to children. A large percentage of interviewees said that history provides great context for life issues. Several of these interviewees—mostly older interviewees—said that it is important for children to learn history so they can "learn from mistakes made in the past" (see the first quotation below). Some other interviewees explained that history is important to developing an identity; for example, these interviewees said things like "they need to know where they came from" and "they need to know their background" (see the second quotation). A few said that it is good to teach history to children because at a young age, retention is good. A few interviewees gave generic, positive responses such as "it is a great idea" and "it is very important."

I think it's a good idea [to teach history to children], and I think it's something we need to do because if you don't know history, then it repeats itself. [female, 58]

Kids sort of need to understand where they're coming from—who we are as a people in America and what things have been done in the past. And, this is a wonderful thing to show them. [male, 43]

A few interviewees responded negatively to the idea of teaching history to children. All of these interviewees said that their children were too young to understand history; the majority had children under age 3.

I guess you can start teaching them, but I don't think he'd comprehend until he's older than this age. [male, 26]

### SUGGESTIONS FOR TEACHING HISTORY TO CHILDREN

Suggestions for teaching history to children varied greatly. While many interviewees spoke generally about teaching history to children, some made suggestions specific to the Centennial exhibition.

About one-half of interviewees made suggestions as to *how* history should be presented. More than one-quarter said that hands-on and multisensory activities are good vehicles for teaching history to children because they interest children and make learning fun (see the first quotation below). Some of these interviewees' responses were prompted by their experiences in the Centennial exhibition and the rest of PTM (see the second quotation). A few suggested showing more pictures in the exhibition so that children can visualize what it was like during the time period being discussed. A couple suggested mixing adult content with children's content. One interviewee each suggested programming, making exhibits child-sized, and interspersing history exhibits with other exhibits.

I'd say make it as interactive as possible, and bring it as much to life as you can—not too boring, keep it fun. [female, 20]

It has to be really interactive, and something that they can touch and feel like the rest of the Museum—something that is interactive and attention grabbing, so they can understand it. [female, 22]

Almost one-quarter suggested *what* content should be presented. A few of these interviewees said that the content should be basic and not bogged down with details (see the quotation below), while a few others said it was important that the content is not “dumbed-down.” Responses correlated strongly to the age of the children with whom the interviewees were visiting (those with young children to the former response, and those with older children to the latter response). Another suggested presenting information that may be personally relevant to children.

Start it [teaching history to children] slowly. Start with the basics—stuff that might interest them [such as] the history of certain things like automobiles, [and other] things that they can touch and actually have a tangible grasp on. [male, 34]

Almost another one-quarter offered no suggestions for teaching history to children, and a few responses were miscellaneous.

A few interviewees suggested *when* to start teaching history to children. The majority said that teaching history to children is not appropriate because children are not old enough to understand; these interviewees were visiting with children under the age of 5. Another interviewee said that it is a good

idea to start teaching children history when they are young, indicating that young children have good knowledge retention.

## HISTORY EXHIBITIONS IN CHILDREN'S MUSEUMS

Interviewees' feelings about having a history exhibition (like the Centennial exhibition) in a children's museum varied greatly. Most interviewees expressed positive, yet nuanced, feelings. For instance, about one-half provided cursory responses, such as "it is a good idea," "it is appropriate," "wonderful," and "it is important"—not indicating for whom or why. A few others said they liked the idea of history exhibitions in children's museums because they felt that history exhibitions offer experiences for adults at a children's museum (see the first quotation below). Still, a few others liked it because they felt history exhibitions provide unique opportunities for shared, family experiences; these interviewees saw layers to the exhibition—exhibits for adults and exhibits for children (see the second quotation).

I like it [having a history exhibition in a children's museum]. I mean, I think it's a good balance, and it provides an opportunity for the adults to gain something out of the experience as well. [male, 40]

(What are your feelings about having this type of exhibit at a children's museum?) I think it's great. (Why would you say it's great?) Just because there's something for us adults to learn and something for the kids to do at the same time, so it keeps us both interested in what's going on. [male, 48]

One-fifth of interviewees expressed somewhat negative opinions about having a history exhibition in a children's museum. While all these interviewees prefaced their responses with a positive comment such as "It is good" or "I like it," these interviewees—all females—said their children were too young to benefit from a history exhibition (see the first quotation below). In doing so, many politely suggested that it may be good for *other* children and made comments to the effect that they were not experts on the appropriateness of including a history exhibition in a children's museum (see the second quotation below).

It is good, but see, I think this Museum is for younger children. My son won't be interested until he is at least six or seven. But for a three- or four-year-old, it doesn't make sense because he just wanted to play with the train station; he didn't care about the diorama. [female, 30]

Yeah, I like it. Like I said, I think it [the Centennial exhibition] kind of went above my kids' learning level and so, I don't know, in a children's museum, it [a history exhibition] is maybe not as appropriate. But, I don't know if it goes, actually. Do teenagers go to museums? I don't know. I'm not there yet. [female, 31]