



# Smithsonian National Postal Museum *Listen, Look & Do* Program Evaluation Report



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August 2008

## EXECUTIVE SUMMARY

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In the summer of 2007, the Smithsonian National Postal Museum (NPM) received support from the Smithsonian School Programming Fund and a gift by the Ford Motor Company to conduct a comprehensive evaluation of the Postal Museum's Listen, Look & Do program, which is designed to serve pre-school aged students from the DC metro area—including day care, public and private schools, community organizations, and head start groups. The monthly program brings classes to the National Postal Museum for a three-tiered experience in which they: 1) listen to a story related to the Museum's exhibits, collections, or themes; 2) look at objects or exhibits in the gallery that relate to the story; and 3) do a creative activity connected to the month's theme. The overarching goal of Listen, Look & Do is to provide a positive museum experience for young students by combining kinesthetic, exhibit-related exploration with traditional Pre-K experiences of storytelling and craft activities. Although individual objectives vary depending on the monthly theme, each lesson incorporates recognition objectives (shapes, colors, letters, or occupations) and often an emotional objective: both of which are components to the Pre-K standards of learning in Maryland, Virginia, and DC. Each lesson also highlights themes and objects central to the National Postal Museum's mission, such as communication, community, and transportation.

The Institute for Learning Innovation (ILI), a non-profit research and evaluation firm focused on learning in informal contexts, was contracted to conduct a program evaluation of Listen, Look & Do for the 2007-2008 school year. The goals of the evaluation were to better understand the nature of the program experience for both students and teachers/caregivers, as well as the range of outcomes (cognitive, affective, behavioral) ascribed to the program experience. The Listen, Look & Do program evaluation was designed around four key questions:

- 1) **What are the benefits and value of the Listen, Look & Do program for participating students?**
- 2) **What are the benefits of the program for participating teachers and caregivers?**
- 3) **To what extent are the specific goals and objectives of each month's program being met?**
- 4) **How does a multiple visit experience of the Listen, Look & Do program impact students over time?**

In order to answer these questions, researchers utilized multiple methods, including an online questionnaire administered to teachers/caregivers following each month's program; in-depth phone interviews with a subset of participating teachers; and a case study focused on one repeat-visit class.

## **Key findings**

The evaluation showed that the Listen, Look & Do program is highly successful in engaging students in a variety of ways, providing them with a positive museum experience, and making connections between classroom and museum learning. Teachers are highly satisfied with the program and view it as a valuable, worthwhile experience for their students, and a way for them to reinforce concepts and skills that are part of their classroom curriculum. Data would suggest that the LLD program continue much of what it is already doing, and that the key elements of the program suggest some best practices that could be transferable to other programs and museums. Key themes that emerged from the study are as follows:

Comfort and familiarity – Data suggested that teachers, especially those who made repeat visits, felt that students became more comfortable and familiar with the museum because of the consistent structure of the Listen, Look & Do program. Teachers felt that the routine of reading a story, then moving into the gallery, and then returning for a creative activity, helped their students to feel a sense of comfort and familiarity with the program because they could “predict” the experience and have some sense of control. Teachers were also pleased that the types of activities, places they went within the museum, and teaching strategies were consistent. The students knew what to expect, and they came to understand the routine and look forward to the visits.

Variety and multiple modes of learning – At the same time, data showed that teachers highly valued the variety of content, teaching methods, and types of learning available for their students. The changing themes each month and the varying modes of engagement (listening, touching, moving, etc.) kept the programs fresh and engaging for their students, and allowed opportunities for multiple types of learners to engage with the experience.

Supporting teaching goals – The study showed that LLD was effective in supporting teachers in the classroom. Teachers felt that the content and types of activities included in each program supported specific classroom goals, ranging from cognitive to social and interpersonal skills. Data suggested that teachers appreciated the connections between the LLD program and DC standards of learning. In addition, almost all teachers were able to incorporate elements of the program into their classroom teaching, such as by reading the book, doing an additional related activity, or setting up a “post office” in their classroom.

Organization and convenience – Data indicated that teachers truly appreciated how well-organized and well-thought-out each program was. They felt that everything was taken care of, and that it was easy to take advantage of the program offerings. Several teachers also valued the proximity of the museum to their schools. They enjoyed being able to walk to the museum, both because it was convenient and because it allowed students a chance to explore their own community.

High quality staff – Teachers were clearly pleased with the high quality of the staff they encountered through the LLD program. In particular, they appreciated the high quality of the teaching instruction offered

by Ms. Nicole over the course of the year. For classes that made return visits, having a relationship to one or two staff members at the National Postal Museum seemed to be an important part of their experience. This suggests that there is value in having one or two dedicated educators for the LLD program, so that children can more easily develop a sense of personal connection and familiarity at the museum.

Creating memorable museum experiences – One of the key outcomes of the program, the study showed, was creating positive memories for children in a museum environment. Students developed and built upon their memories of the Postal Museum over time, and ended the program year with many positive associations with the experiences. Of particular impact on students was the social component – the fact that they experienced the museum with their friends, classmates, and teacher – and the large-scale objects and exhibits in the museum. This outcome should not be underestimated, as creating early, positive, and memorable experiences in a museum context may lead to a higher likelihood of utilizing museums later in life.

Suggestions for improvement – While the study showed that all of the LLD programs were successful on numerous levels, and that the program as a whole is overall meeting its goals, data suggested some ways in which the program could be even more effective. These include:

- 1) Pack in fewer activities per lesson
- 2) Lower the reading level of the books for some classes
- 3) Reduce the number of goals and objectives for each lesson
- 4) Ensure that goals and objectives are realistic, and are also broad enough to be achieved
- 5) Allow more “free” or unstructured time for students to play with and explore materials or areas on their own
- 6) Set up “museum rules” from the beginning, so that children have a better sense of boundaries and limitations

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# INTRODUCTION

## Project Background

In the summer of 2007, the Smithsonian National Postal Museum (NPM) received support from the Smithsonian School Programming Fund and a gift by the Ford Motor Company to conduct a comprehensive evaluation of the Postal Museum's Listen, Look & Do program, which is designed to serve pre-school aged students. Every month for two weeks, young children from the DC metro area—including day care, public and private schools, community organizations, and head start groups—visit the National Postal Museum for a three-tiered experience in which they: 1) listen to a story related to the Museum's exhibits, collections, or themes; 2) look at objects or exhibits in the gallery that relate to the story; and 3) do a creative activity connected to the month's theme. While multiple visits are encouraged, one-time visits are also allowed.

Listen, Look & Do (LLD) was created in January 2006 in response to the growing number of local pre-K school groups visiting the Museum without a set agenda or visit objective. The program is designed to provide pre-school aged children with an opportunity to have a structured educational experience in a familiar environment to which they can consistently revisit. The overarching goal of Listen, Look & Do is to provide a positive museum experience for young students by combining kinesthetic, exhibit-related exploration with traditional Pre-K experiences of storytelling and craft activities. Although individual objectives vary depending on the monthly theme, each lesson incorporates recognition objectives (shapes, colors, letters, or occupations) and often an emotional objective: both of which are components to the Pre-K standards of learning in Maryland, Virginia, and DC. Each lesson also highlights themes and objects central to the National Postal Museum's mission, such as communication, community, and transportation.

The Institute for Learning Innovation (ILI), a non-profit research and evaluation firm focused on learning in informal contexts, was contracted to conduct a program evaluation of Listen, Look & Do for the 2007-2008 school year. The goals of the evaluation were to better understand the nature of the program experience for both students and teachers/caregivers, as well as the range of outcomes (cognitive, affective, behavioral) ascribed to the program experience. The study results will be used to build upon the existing programming at the NPM, as well as to provide valuable information to other Smithsonian Institutions wishing to develop programming for early childhood.

## Evaluation Design

The Listen, Look & Do program evaluation was designed around four key questions:

- 1) What are the benefits and value of the Listen, Look & Do program for participating students?
- 2) What are the benefits of the program for participating teachers and caregivers? More specifically, how effective is the program in supporting teachers' needs (logistics, classroom support, etc.)?
- 3) To what extent are the specific goals and objectives of each month's program being met?

- 4) How does a multiple visit experience of the Listen, Look & Do program impact students over time, particularly in terms of building cognitive skills (observing, comparing, associating), and increasing their familiarity and comfort in the museum?

In order to answer these questions, researchers utilized multiple methods, including an online questionnaire administered to teachers/caregivers following each month's program; in-depth phone interviews with a subset of participating teachers; and a case study focused on one repeat-visit class.

## METHODS

The Listen, Look & Do study utilizes multiple methods in order to answer the various evaluation questions for different target audiences (teachers<sup>1</sup> and students). Towards this end, the evaluation design includes three components: 1) a web-based teacher survey, administered to participating teachers following each month's program; 2) in-depth, semi-structured phone interviews with participating teachers; and 3) a case study of one participating class, involving pre-post activities with students, focused observations during four of the programs, and four follow-up visits in the classroom, in which students drew pictures of their museum visit and participated in an interview with the researcher.

### **Web-based teacher survey**

The web-based questionnaire uses a combination of scaled, closed, and open-ended questions (See Appendix A for a template of the survey), and is designed to capture specific programmatic feedback from teachers on the nature of their experience (enjoyment/satisfaction, logistical issues), perceived value of the program for teachers, the extent to which the program supports their teaching goals, and suggestions for improvement. The questionnaire also asks teachers to address their students' experience of LLD, including such issues as the value and benefit of the program for students, what they take away from it (including cognitive, affective, and behavioral outcomes), and how the program could be improved to better support students' growth and learning. The data from teachers is useful on two levels. First, teachers are initiating visits to the NPM and thus it is important to measure their satisfaction with the program; and, second, given the difficulties of conducting evaluation with very young children, the teachers offer an additional perspective on student outcomes and experience of the program.

After a group participated in Listen, Look & Do, NPM staff sent them an email asking them to respond to the web-based survey within a week of participation. For those who did not respond, a reminder email was sent. As an incentive, all teachers who completed a survey were entered into a raffle for a \$25 gift certificated from Amazon.com. Teachers were encouraged to fill out the survey for each month's program they attended. Data were captured through the survey software WebSurveyor, exported to SPSS 15.0, and analyzed by ILI researchers.

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<sup>1</sup> Throughout this report, we use the term "teacher" to refer also to teaching assistants and caregivers who participated in bringing students to the Listen, Look & Do program.

## Teacher phone interviews

In addition to the web-based survey, ILI researchers conducted follow-up phone interviews with a subset of teachers in order to gain a deeper understanding of their experiences and perceptions of Listen, Look & Do at the end of the program year (See Appendix B for instrument and protocol). Rather than being program specific, these interviews were designed to document teacher feedback on the program as a whole. ILI worked with NPM to select a representative sample of teachers, based on type of program (school, community-based group, etc.), location, and frequency of visitation. Ultimately, the teachers interviewed were based on a convenience sampling method – that is, researchers interviewed those teachers who were willing and available for the interview. It is important to note that there may be a self-selection bias here (that is, teachers who were most enthusiastic about the LLD program may be more likely to participate in the phone interview); however, this possible bias is not problematic as the evaluation focuses on the program’s potential for providing educational, satisfying experiences to young children, and thus it is not essential to have only representative data.

ILI developed the instrument and protocols in consultation with NPM staff, conducted the interviews, and analyzed the data primarily using qualitative content analysis methods.

## Case Study

ILI researchers conducted an in-depth case study with one classroom, selected by NPM staff because it fit the criteria for the primary target audience of the program (i.e. being a public school in a low income area, located within walking distance of the Postal Museum, and representing a demographic typically underserved by museums). The case study took place over the course of the entire school year and included four key components:

***Pre- and post-program year assessment***, in which students were asked to talk about and draw a picture about what they thought of when they heard the word “museum” (See Appendix C for instrument and protocol), first in October 2007 and again in May 2008 (after completion of the program). The researcher, with assistance from the case study teacher, then asked each student what they had drawn and wrote down their responses on their picture. Researchers then coded the pictures and words in terms of their relevance to museums and the nature/content of the response. The data were used to assess any changes in the students’ level of comfort and familiarity with the museum environment, one of the primary intended outcomes of the program.

***Focused observations*** of four program experiences, in which an ILI researcher took detailed notes on student participation and engagement across the three components of the program lesson: story time, gallery tour, and art/craft activity. (See Appendix D for a template of observation instruments and protocol). These data were used as a way to triangulate with the student data, and to provide an external, expert perspective on the effectiveness and quality of the LLD programs. The classroom teacher was also asked to fill out detailed observation notes of her classroom’s experience, though she was only able to do so after each visit because of the attention required of her during the program visit. She completed three out of the four observations.

## **Student drawings**

The researcher visited the classroom 1-2 days after each of the four museum-based observations for follow-up. The researcher first asked each participating student (i.e. those who had been on the Postal Museum field trip that week) to draw a picture of what they remembered from their visit to the Postal Museum. Students were given a blank piece of paper and crayons or markers and were allowed to draw as long as they wanted, up to five minutes. If the student was still drawing, the researcher asked them to finish up and allowed 1 additional minute.

The pictures were used as a way to gauge the student's memory and impressions of the Postal Museum visit, and thus were not assessed for accuracy or detail of the drawing itself. Pictures were coded for what students said the picture was about, the extent to and ways in which that was relevant to the museum experience, and the detail of their description. The coded data were then entered in SPSS 15.0 and analyzed, along with a qualitative analysis. (See Appendix E for protocols).

## **Student interviews**

During the four follow-up classroom visits, the researcher interviewed each student to find out what they drew in their picture of the museum visit, what they remembered about their visit, what they liked the best, and other measures tied specifically to that month's program (See Appendix E for protocols). Given the qualitative nature and small sample size implicit in the case study, data from this portion of the study were analyzed using a qualitative content analysis approach. Some data were coded and entered in SPSS 15.0 for analysis. Data were used to gain a better understanding of what students remembered about their visits, and thus the extent to and ways in which they were engaged in each program; as well as to assess any changes in their perceptions and connection to the museum over time.

# **RESULTS AND DISCUSSION**

## **Description of samples**

### **Teachers**

**Web-based survey** - Thirty-eight web surveys are included in this sample, drawn from 7 months of programming: November ("Arrow to the Sun"), December ("Mailing May"), January ("The Giant Hug"), February ("Duke Ellington"), March ("Amelia and Eleanor Go for a Ride"), April ("Owney the Dog"), and May ("Dear Juno")<sup>2</sup>. A total of 19 teachers from 10 schools/organizations responded to at least one survey (the total number of respondents and organizations are less than the total number of surveys as teachers who make repeat visits are asked to fill out the survey for each month's lesson.). Overall, there was a 76%

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<sup>2</sup> Due to timing issues, the evaluation began after the first program (September), so we do not have teacher feedback for that month. We attempted to collect data in October through hard-copy questionnaires but had a very low response rate, so switched to the web-based survey in November. Thus the data we include here covers 7 of the 9 total *Listen, Look & Do* programs for the 2007-2008 year.

response rate to the monthly survey (See Table 1). Most respondents were female (only one is male and two were unidentified)<sup>3</sup>.

**Table 1:** Response rate for teacher web-based survey

<b>Program</b>	<b>Teachers attended (N)</b>	<b>Response to survey (N)</b>	<b>Percentage</b>
November 2007 – Arrow to the Sun	5	5	100%
December 2007 – Mailing May	8	4	50%
January 2008 – The Giant Hug	6	5	83%
February 2008 – Duke Ellington	10	7	70%
March 2008 – Amelia and Eleanor Go for a Ride	9	7	78%
April 2008 – Owney the Dog	10	5	50%
May 2008 – Dear Juno	5	5	100%
<b>TOTAL response rate</b>			<b>76%</b>

**Teacher phone interviews** - A total of nine teachers (out of 23 who attended at least one program during the year)<sup>4</sup> were reached and interviewed by phone. Four had been teaching for more than 20 years; one for 10-14 years, two for 5-9 years, and two for less than five years. Utilization of the Listen, Look & Do program varied widely among the teachers, ranging from 1 to 7 visits during the 2007-2008 year, with an average of 3.4 visits total. Two-thirds (n=6) had brought a class to Listen, Look & Do previously, but only one teacher had been to the Postal Museum on her own as a visitor.

### **Students**

Students directly included in the evaluation were those in the case study class. The case study class was selected by LLD staff, in consultation with ILI researchers, because it fit the criteria for the program’s main target audience—that is, students from local (within walking distance to the museum), public schools situated in low income neighborhoods. All students in the case study were in a pre-K/Kindergarten combination class located in a typically low SES and predominantly African-American neighborhood in Washington, DC. While the class size and students changed slightly throughout the year, there were a total of 22 students who experienced at least one of the LLD lessons. Two thirds (68%; n=15) were male, and one third (32%; n=7) were female. All but one of the students was African American. The class as a whole visited the museum for a Listen, Look & Do lesson seven times (out of nine) during the 2007-2008 school year.

<sup>3</sup> Throughout the document, we will be making statements about the “teachers in the program.” It is important to note that these teachers are the respondents of the survey and do not represent the whole group of program participants.

<sup>4</sup> Number of teachers interviewed was lower than the total because of lack of teacher response, and some teachers no longer being employed at the school when researchers attempted to reach them.

## What are the benefits and value of the program for students?

This section draws primarily upon the web-based survey and teacher phone interviews to answer the question of the program's benefits and value for students. Results from the case study are reported in the last section ("How does a multiple visit experience of Listen, Look & Do impact students over time?").

### ***Perceived benefits of program for students***

Overall, data suggested that the Listen, Look & Do program provides a valuable, enriching experience for students. During the phone interviews, teachers described numerous ways in which they felt students benefited from participating in LLD, ranging from personal/social outcomes to cognitive and skills-based gains. These included:

**Getting out of classroom, experiencing community** – Several teachers felt that exposing children to a new environment and getting them out of the classroom was extremely valuable. As most of the participating schools were within walking distance of the Postal Museum, teachers valued giving their students a sense of the surrounding community. One teacher put it: "The aspect of taking them out of the classroom [was most valuable.] For me, it wasn't just the museum, but the walk there and the walk back – letting kids experience the surroundings of the community."

**Exciting, enjoyable experience** – Most teachers suggested that the LLD program provided a unique, enjoyable experience for children. They mentioned how students looked forward to visits, were excited to come each month, and generally enjoyed the program. The importance of this outcome should not be underestimated, as research shows that creating a positive, enjoyable experience in a museum context may help set the stage for future museum visitation (Falk & Dierking, 1997; Finson & Enochs, 1987; Jensen, 1994).

**The "wow" factor** – Several teachers mentioned that students enjoyed seeing objects they would not normally see, particularly the large-scale vehicles (train car, mail truck, and airplanes), and immersive exhibits like the Forest. Teachers suggested these objects helped create positive, memorable experiences for the children. One teacher commented, "They enjoyed traveling around the museum – it's not something that they do all that often, especially with this demographic. Just going into the forest, the different parts of the museum (was good)...they might have a different perspective on what they can do in museums or in a Smithsonian." Research on children's perceptions and experiences of museums supports this finding that children are often most drawn to large-scale exhibits, which can create long-term memories and a positive association with the museum environment. (Anderson et. al. 2004, Piscitelli & Anderson 2001).

**Variety of learning modes** - Many teachers felt it was valuable to engage students in a variety of learning modes – including visual, aural, kinetic, and even olfactory. They felt that this variety engaged a wide range of students and different types of learners in the program, and also encouraged students to connect to the experience in multiple ways. Teachers particularly valued the **hands-on, interactive** experiences provided by the LLD program. For example, one teacher noted, "As much as I can tell them about the post office in a book, going there, and doing something hands-on really increases what they can get out of it and what they can learn."

**Reinforces classroom concepts** – Interview data suggested that the LLD program was particularly successful in reinforcing concepts and skills that students were working on in the classroom, such as identifying colors, patterns, emotions, learning about community and transportation, and social/behavioral skills. In this way, teachers felt the program increased student learning in these areas, as it provided an additional opportunity to explore these concepts and skills in a different environment.

**Promotes comfort and familiarity in museum environment** – Many teachers felt the students benefited from having a set routine (story, gallery tour, art activity), while the content changed each month to keep it interesting. They felt this allowed the students to become familiar and more comfortable with the program and the museum, as they could “predict” the routine and thus have some sense of control, while also engaging in new content each time. One teacher commented that the students “knew the procedure”; which provide a stable environment; another noted that the students learned “exactly where and how things worked”; and another teacher said her students felt the museum was a “safe place and were excited to return.” Essentially, the program is able to reduce the “novelty” effect (in which students are distracted and cannot focus) by repeating a familiar structure (in this case, the storytime, gallery tour, and art activity, in addition to other practices and activities); at the same time, LLD provides new topics/content each month in order to hold students’ interest over time.

An additional factor in promoting comfort and familiarity is the consistency and high quality of the staff. Particularly for groups/classes that made repeat visits to LLD, data suggested that having the same educator facilitate the lesson each month may help students connect more and feel more comfortable at the museum. It is also important that the educator be well trained to work with pre-K children, friendly, flexible, and able to adjust the experience to each group’s needs and/or various levels of development. For example, one teacher noted:

“Ms. Nicole is awesome. She really works to make sure the children stay focused and motivated. She interacts with them and keeps them interested. She always has fun things planned for us.”

**Promotes literacy** – A couple of teachers specifically felt that the program helped support student literacy. They appreciated the inclusion of story time and the way it was connected to other activities and experiences in a fun and engaging way. They also valued being able to take the book back to the classroom, where children could continue to explore the story and become more familiar with it.

**Developmentally and age-appropriate** – Several teachers noted that the programs were age appropriate for their students (4-5 year olds) in terms of their cognitive and social development. They felt the activities were engaging, diverse, and allowed children to maintain focus throughout the program. For example, one teacher noted that the programs offered a “nice combination, a nice variety of interactive activities...[that gave students] a time to move and a time to listen and focus.” Some teachers also commented that the museum educators were particularly good with this age group; one teacher put it as follows: “The presenters [museum educators] are child-friendly – they really ‘get’ the age.”

**Relevance to students’ lives** – A couple of teachers commented on the ways in which the LLD program created connections to students’ everyday lives, such as through real-life characters in the stories, addressing issues (such as family), and having some stories set in the DC area. These teachers felt students

could connect more to the content and activities of the program. One teacher noted that each lesson used “a story to teach real life things, relationships...[the] general concepts in the stories are interactive and great for this age for them to retain information.” This is a positive finding, as research supports that creating personal relevance is an important factor in supporting learning in museums (Falk & Dierking 2000).

**Increased knowledge of postal system** – A couple of teachers felt there was value in the content students learned about, particularly in terms of the postal system, why people send mail, and how mail is delivered.

Data from the web survey confirmed the fact that teachers found the LLD lessons to be valuable and beneficial for students. Respondents were asked to rate a variety of items from 1 to 5 (with 1 being “not at all” and 5 being “very much”) based on their perception of their students’ experience of that month’s program. Data indicated that they saw their students’ experience as highly positive, rating each statement from 4.68 to 4.87 on average. No teacher rated any single item less than a “3.” (See Table 2 below). It is possible that there is some sample bias here, as teachers who took the time to fill out the web-based survey may have been those who felt most positive about the program.

Teachers clearly feel that the students enjoy coming to the Postal Museum and that they are having valuable and educational experiences in the program. While the sample sizes are too low to determine any significant differences among the items, it is interesting to note that the highest ratings are for feeling comfortable in the museum environment (n=4.87) and learning something new (4.76)—two of the program’s primary objectives.

**Table 2: Teachers’ perceptions of student outcomes**

Statement	N	Mean	Min	Max	Std. Dev.
My students enjoyed this lesson	38	4.74	4	5	0.446
My students were engaged and interested in the topic and activities	38	4.68	3	5	0.525
My students learned something new during their visit	37	4.76	3	5	0.495
The lesson helped my students reinforce knowledge or skills they already have or are developing	38	4.74	3	5	0.554
My students felt comfortable in the museum during this lesson	38	4.87	3	5	0.414

When looking at item ratings by program, “Owney the Dog” (April) has the lowest means for almost all statements, whereas “Dear Juno” (May) has the highest means in all statements. (See Table 3 below). However, since the sample sizes are small, one must be cautious about drawing conclusions based on small differences in means. There is no indication that any single program is better or worse than the others. Teachers rate all aspects of every program quite high (between 3 and 5); and thus there is reason to believe all programs are seen as successful and that no “red flags” appear for any one of them.

**Table 3: Teacher ratings of student outcomes (by lesson)**

<b>Statement</b> (Please rate your overall feelings about the following aspects of today's program...with 1 being "not at all" and 5 being "very much")	<b>Arrow to the Sun (Nov)</b>  (n=5) <b>Mean</b>	<b>Mailing May (Dec)</b>  (n=4) <b>Mean</b>	<b>The Giant Hug (Jan)</b>  (n=5) <b>Mean</b>	<b>Duke Ellington (Feb)</b>  (n=7) <b>Mean</b>	<b>Amelia &amp; Eleanor Go for a Ride (March)</b>  (n=7) <b>Mean</b>	<b>Owney the Dog (April)</b>  (n=5) <b>Mean</b>	<b>Dear Juno (May)</b>  (n=5) <b>Mean</b>
My students enjoyed this lesson	4.80	4.75	4.60	4.86	5.00	4.20	4.80
My students were engaged and interested in the topic and activities	4.80	4.75	4.40	4.71	4.86	4.20	5.00
My students learned something new during their visit	4.80	5.00	4.40	5.00	4.86	4.20	5.00
The lesson helped my students reinforce knowledge or skills they already have or are developing	4.60	4.75	4.20	5.00	5.00	4.40	5.00
My students felt comfortable in the museum during this lesson	5.00	5.00	4.80	4.57	5.00	4.80	5.00

Web-survey respondents were also asked to answer an open-ended question on the perceived value and benefit of that specific lesson to their students as follows: “What aspect of the lesson did you feel was most valuable/beneficial for your students? Why?” While responses were based on a specific month’s programs, many similar themes emerged across all the lessons:

**Variety of learning modes** - Almost 60% of teachers (n=20)<sup>5</sup> commented on how the lessons’ activities and objects were appropriate for young children. Teachers noted the variety of teaching methods and modes of learning and how well connected these modes were. A few representative quotes are presented below:

“The process was great...story introduction; imaginary play to prepare for getting the clay; off to the real objects, then the clay activity.” (Arrow to the Sun, November)

“Diversity was dealt with age-appropriately for our very young group. Not too much focus on racial diversity, but diversity in anything-- from bead necklaces children wore to musical instruments in Ellington's band. I also appreciated that equal amount of focus was given to similarities as well as differences.” (Duke Ellington, February)

“The most valuable aspect of the lesson was the variety of learning tools used to engage the students' young minds - book, pictures of instruments, instruments, stamps.” (Duke Ellington, February)

<sup>5</sup> As some of the same teachers completed the online survey multiple times (for multiple program visits), data throughout this section represents number of responses in each category, not the number of individual teachers.

**Learning something new** – Almost one third of the respondents (29%, n=10) mentioned new content as valuable to the students. These teachers noted that students learned something new, were presented with new information, or reinforced information presented in classroom. The following comments help illustrate this trend:

“Learning the colors of the rainbow. Our children learned a new color that day. Indigo is the mixture of purple and blue.” (The Giant Hug, January)

“The most beneficial aspect of the lesson was the contrast between the textures. We have been working on a science unit on the five senses. We have been exploring textures using the feely box so the lesson was an extension.” (Amelia and Eleanor Go for a Ride, March)

“I liked that the story showed that other cultures may have different forms of writing.” (Dear Juno, May)

**Structure of lesson, making connections** - Some teachers (24%, n=8) felt that the most valuable aspect of the *Listen, Look & Do* program were the ways in which the lesson facilitates students making connections, as the comments below help illustrate:

“I felt the story and Museum visit connections were most valuable because the story helped them to understand the many ways mail travels for delivery and visiting the vehicles mentioned in the story helped them to further make connections.” (The Giant Hug, January)

“The students enjoyed learning about a famous musician from their home town, Washington, D.C. (thank you for making this connection for them!)” (Duke Ellington, February)

“Since our children have heard the story before, I feel it was great to walk [through] the museum and pretend to be Owney. It was also very beneficial for them to see the exhibit of Owney with all of his medals. Our children also love doing art projects.” (Owney the Dog, April)

**Enjoyment of activities** - Students’ enjoyment of the activities, including the visit to the National Postal Museum, was also noted by teachers (24%, n=8). Following are a few representative quotes:

“I also liked the ‘Highlight’ of the tour: the students really enjoyed sending mail to themselves.” (Dear Juno, May)

“Train theme is such a powerful attention-getter for my group. They enjoyed the visit so much. Made every part of the lesson so attractive!” (Mailing May, December)

### **Suggestions for Improvement**

While teachers were generally very positive about their program experience, data from the web survey and phone interviews indicate a few potential areas for improving the program. These included:

**Slower pace, less packed** – A few teachers felt there was too much packed into each lesson. While they enjoyed the variety of activities and experiences, some felt there was too much going on for students of their age group, and they suggested a slightly slower pace.

**Allow more “free” time to explore materials on their own** – A couple of teachers wanted students to have more “unstructured” time to explore materials on their own. This would have to involve some guidelines and structure of some sort, however, so that students could make good choices. For example, observations indicated that students were highly engaged in the instrument activity during the “Duke Ellington” (February 2008) lesson. Students were encouraged to play freely with the instruments for some time before a more structured music activity began.

**Lower the reading level of books** – Quite a few teachers felt the reading level of some of the books was too high for their age group. These teachers noted that the museum educator had to paraphrase sections of the book, and thus suggested that the museum select books at a more appropriate reading level for 4 and 5 year olds -- especially since the teachers are able to take a copy of the book back to the classroom.

Data from the web survey provide teachers’ suggestions for improving specific program lessons (See Table 4 below) for all suggestions, organized by lesson.

**Table 4: Teachers' suggestions for improvement by lesson**

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**Arrow to the Sun (November)**

- Provide the lesson plans before. You did this once and it helped me. The teacher gets an idea of what to expect and front-end lead the students.
- I would provide name tags for children if school classes don't bring their own.
- Even more movements; they remember them the most.
- Having more time for practical demonstration.

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**Mailing May (December)**

- Engage the children more directly during the tour.

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**The Giant Hug (January)**

- Because our children are younger, it takes us a little longer to go from one place to another. We went over our time because there was so much planned for us to do, all of which was great, but the time it took to move around and get all the kids together took a while.
- I think that during story time, questions should be asked to make sure that children stay engaged and remember story details.
- The positioning of the book during the story reading. Young children need to see the pictures as the story is being read to keep them fully focused, Nicole read the words on each page and then showed the pictures. Some of the students could answer her questions but others would have participated more if they could see the pictures as she read. I shared this with Nicole while I was there.
- Use colored construction paper instead of plain paper when students are asked to line up according to the colors of the rainbow that they are given.

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**Duke Ellington (February)**

- A little more organization with the playing of the musical instruments. Freely exploring them was fine but there should have been a follow-up with some formal use of the instruments.
- More time to play with the instruments would have been great. Also, it seems that children wanted to experience playing more than one of the instruments.
- The program seemed a little fast paced... maybe more time for the kids to explore the materials on their own would help relax especially the little ones.

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**Amelia and Eleanor Go for a Ride (March)**

- A bigger space for the art project.
- Maybe we could spend more time in the museum.
- My kids LOVED walking around the museum, but they were a little confused about what was expected of them. (Can I bang on the glass? Can I run around? Where are we going next?) I could have done a better job of explaining that, too, though.
- Since SI has the resources I would suggest having either stickers or color copies of clothing used in flight for the puppets (goggles, flight jacket, head gear, scarf, etc).

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**Owney the Dog (April)**

- Shorten the story a little.
- Some older students remembered the "Owney" visit from last year and missed sleeping on a mail bag in the mail train!
- The art activity was slightly over some of our children's heads. My classroom has children as young as 2.5 years old. They don't really know the words to describe their friends or their feelings when it comes to their friends.
- We didn't do the (arts) activity at the museum but by that time the trip was getting really long for them.

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**Dear Juno (May)**

- I understand the difficulty in having objects that smell in a museum setting. Perhaps having more objects for the children to explore at the table or perhaps they could do leaf collages(?)

- One suggestion would be for the students to bring a flat art project from school or a photo to place in their letter.

Many teachers were unable to offer suggestions for improvements, and instead commented on the high quality of the program as it is. Table 5 below lists a selection of positive comments from teachers by lesson, representative of the overall feedback from teachers.

**Table 5: General positive comments about the lessons**

<p><b>Arrow to the Sun (November)</b></p> <ul style="list-style-type: none"> <li>• I couldn't imagine improving on today's program.</li> <li>• Putting Pueblo "Indian" tale and the Postal Museum could easily be a challenge. But the lesson was well made by not only incorporating postal stamps (representation) but also real pots (real) and making a long snake with our body (physical) and working as a group (team work). Good work!</li> <li>• Continue to offer quality programming for pre-K and kindergarten classes.</li> <li>• Ms. Nicole was great! She did a great job getting the "distracted" children back on track with her tactics. This is a great program. Jeff was wonderful to work with in getting our classroom scheduled for a visit. A very enthusiastic staff.</li> <li>• The program has successfully given me ideas and other activities that I can incorporate in my classroom.</li> <li>• We always enjoy the visit to the Postal Museum; thank you!!</li> </ul>
<p><b>Mailing May (December)</b></p> <ul style="list-style-type: none"> <li>• We liked the whistle activity, too. There were too many signals for my young group, but Ms. Nicole quickly limited focus on just a few and that worked well.</li> <li>• It was so much fun! I liked how this lesson contained many math concepts, weight of a child and less/more, patterning of stamps, whistling to counts, etc.</li> </ul>
<p><b>The Giant Hug (January)</b></p> <ul style="list-style-type: none"> <li>• I really think that Ms. Nicole does a great job with the students.</li> <li>• Ms. Nicole is awesome. She really works to make sure the children stay focused and motivated. She interacts with them and keeps them interested. She always has fun things planned for us! Thanks Ms. Nicole!!!</li> </ul>
<p><b>Duke Ellington (February)</b></p> <ul style="list-style-type: none"> <li>• As usual the visit was developmentally appropriate.</li> <li>• It was great</li> <li>• The lesson was very good and appropriate for the pre-k age group - thank you! The children came to school tired today, so this was a very big adventure and they were not as engaged as we would have hoped. Yet, I know they took much away from the experience.</li> <li>• Best trip since September :)</li> <li>• It was brave of you to let a group of preschoolers freely play musical instruments! Everyone played their own ways, and it made their music more exciting and beautiful together. What a powerful message to wrap up the lesson with emphasis on diversity! Thank you.</li> <li>• Thank you for all you assistance in setting up and executing this opportunity for our students!</li> <li>• Thank you so much! My students greatly enjoyed this opportunity!</li> <li>• We really do enjoy the time we spend at the museum. Thank you all for the hard work that you put into the lessons every month. Thanks for welcoming us every month!!</li> </ul>
<p><b>Amelia and Eleanor Go for a Ride (March)</b></p> <ul style="list-style-type: none"> <li>• I really can not think of anything to improve the lesson. It was just great!</li> </ul>

- [Suggestion for improvement] is always tough to come up because you do such a great job!
- Please give a little "wobble-settling-in" time at the beginning of the lesson. Chairs in the children's size outside of the school environment is just too much temptation for our friends not to wobble a bit. Thanks for everything, we had a great time!
- The fact that it is done in parts, with interactive experiences, makes this such an awesome program. I (we) also love how, when they moved throughout the museum, they were planes or cars---so age appropriate! This is a super program offered to the children-we thank you for it and for the materials you share! Ms. Nicole is wonderful!
- This lesson was age appropriate for my Head Start students. All activities were short enough to hold their interest and all directly related to the story. Students shared their projects with parents and the parents all asked about the book. It will go home with each student for a night so that the parents can share the story with their child.
- We liked puppet making with focus on different textures and freedom to express individual styles!

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#### **Owney the Dog (April)**

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- I applaud Ms. Nicole for taking on so many of our children at a time. You are all always so accommodating and we at Georgetown Law Early Learning Center truly appreciate it!!
- My students barked all the way back to school.
- Thank you always for fun and creative ways you provide for children to learn. Thank you for accommodating such a large, busy group! We will look forward to the next month (last visit for this school year-- sob!).

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#### **Dear Juno (May)**

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- Ms. Nicole is AWESOME and she will be greatly missed. This lesson was super-the children were very excited about it-it was great follow up & summary to all of our visits plus an additional experience as we visited two areas we did not visit before.
  - I think the Dear Juno lesson was great just the way it was!!!
  - Thanks for thinking of us!
  - Thanks soo much for having us at the postal museum this past school year. Our children enjoyed their visits!!
- 

Overall, data clearly indicate that teachers find the Listen, Look & Do program to be of great benefit, value, and enjoyment for their students. They feel students benefited from getting outside the classroom and exploring their community; became familiar and comfortable in the museum context; came to understand the "routine" without getting bored with it; engaged in a variety of learning modes; learned something new, such as about relationships, emotions, and how the postal system works; reinforced important concepts and skills, such as identifying colors and numbers; and were able to have an enjoyable, diverse experience in a museum.

### **What are the benefits of the program for participating teachers?**

This section utilizes data from the monthly teacher survey, as well as the teacher phone interviews, to answer the question of how participation in the Listen, Look & Do program is seen to benefit teachers. This includes: 1) Overall direct benefits to teachers – that is, how they see the program as beneficial to them and their work; 2) Relevance to teaching goals; 3) Ability to incorporate LLD into classroom teaching; and 4) Overall teacher satisfaction with the program. It is important to note that throughout this section, there is some thematic overlap with the program's benefits and effectiveness for students, as teachers naturally view the value of programs through this lens.

## **Overall direct benefits for teachers**

As part of the phone interview, researchers probed teachers on the extent to which they themselves benefited from participating in the Listen, Look & Do program, personally and/or professionally. Data suggested that teachers felt participation was highly beneficial to them. Specifically, they felt the program offers the following:

**Supports classroom teaching goals** – One theme that emerged in the phone interviews was that LLD supports teachers’ classroom goals and objectives, including language and literacy goals, content areas such as community and transportation, and social skills such as empathy. Many teachers commented on the fact that the content, skills, and learning styles included in the lessons were well-aligned with their curriculum—thereby helping them to reinforce concepts and skills. One teacher commented: “The program extended learning from concepts in class...(such as) learning about colors, transportation...The literature selected was directly connected to concepts being taught in the classroom—social studies, math, science, literacy skills, like designing the stamp, delivery of mail, different regions where mail is delivered and how they do it, feelings around the mail carrier dog, to how family members stay in touch.” Another noted that the program “provided practice for the skills we are working on – listening, questioning, remembering stories.”

**Supports specific DC standards of learning** – Similarly, some teachers greatly appreciated that the programs seemed specifically designed to support standards of learning for the DC school district, which also helps them meet their classroom goals. One teacher noted that the museum “planned activities according to the standards; then after the activity, they would give you the book and the standards and then I could do an activity related to the book and standards back in the classroom.” Another commented that the program “covered a lot of standards – social studies and literacy – [it was] really good for DC standards.”

**Well organized, convenient** – Some teachers found value in the convenience of the program – being close by geographically, well-organized, and easy to coordinate. Teachers generally felt that the logistics and overall structure of the program made it easy for them to utilize the program, and did not require a great deal of effort or organization on their part.

**Offered ideas, resources for in-class activities** – Particularly for newer teachers, the LLD program provided ideas for types of activities; ways of integrating reading, art, and other areas; and even tactics for promoting better behavioral and social skills. One new teacher said the most valuable aspect of the program for her was “being able to see how they [the museum educators] put together and compiled different details with the book and the museum to create a cohesive learning experience...[it was] very eye-opening and useful in lesson plan design.” In this way, the program can serve as a model for classroom teachers and daycare providers looking for new ideas and approaches for working with young children.

## **Relevance to teaching goals (specific program)**

As the LLD program is intended to support teachers in their classroom objectives, the web survey asked teachers to rate the extent to which a specific lesson related to their teaching goals and objectives. Of those respondents who answered this question (n=31), they were all able to articulate some significant ways in

which the program supported and/or contributed to their classroom teaching. These fell into three main categories: content and theme; social and behavioral skills; and cognitive skills:

**Content/theme** - The majority of teachers (71%, n=22) commented on how the content and theme of the lesson connected with the curriculum they are working on in their classrooms, as illustrated by the quotes below:

“We are learning about famous African Americans, so this lesson perfectly fit our theme for the month.” (Duke Ellington, February)

“We are talking about families and the story talks about two friends who were like family members.” (Amelia and Eleanor Go for a Ride, March)

“We have been studying the five senses, so it was really great to have the different texture words (soft, rough, bumpy, etc.) reinforced.” (Amelia and Eleanor Go for a Ride, March)

**Social/behavioral skills** - Other comments, made by 23% (n=7) of teachers referred to skills such as learning how to listen, follow directions, and respect others. The following quotes illustrate the theme:

“We are really working on following directions, walking in line, and those kinds of things. This time we were introduced to the rules of the Postal Museum. We had to use listening ears, keep our hands to ourselves, and follow the leader. These are actually all things we are working on in our classroom.” (The Giant Hug, January)

“The lesson matched the standards. In HS one of our goals is getting along with our peers and completing our work.” (Owney the Dog, April)

“It was not related to our monthly study theme but it was a nice reinforcement from when we had gone before. Teaching pre-schoolers their ‘museum manners’ is vital and the exhibits and space allow (at the Postal Museum) the children to interact with the objects yet still learn the boundaries of not going/interacting with all of the displays.” (Dear Juno, May)

**Cognitive skills** - Another set of comments referred to skills such as identifying patterns, sequencing, and making comparisons and observations and were made by 19% of teachers (n=6). A couple of representative quotes are presented below:

“Rather than handing the ‘right’ answers, we focus on observing and comparing as thinking skills. So many comparisons, such as different gloves and vehicles, were just great for them!” (Amelia and Eleanor Go for a Ride, March)

“Writing letters was a great way for to enforce literacy skills.” (Dear Juno, May)

**Other comments** included sensory/motor skills (10%, n=3) and emotional/ affective skills (3%, n=1). For example, one teacher mentioned that the program helped develop students’ fine motor skills, and another appreciated the fact that lessons addressed emotional sensitivity (i.e. being able to identify the emotions of others, or of characters in a story) rather than just “academics”.

These results indicate that teachers find the Listen, Look & Do program relevant and useful for their overall teaching objectives—a sign that the program’s curriculum and focus are well aligned with teachers’ needs.

### ***Incorporating lesson into classroom teaching***

NPM staff was also interested in the extent to which teachers extended the experience of Listen, Look & Do beyond the museum and into the classroom. This can be seen as an indicator of the usefulness and overall value of the LLD program for teachers; and, thus, the extent to which their – and their students’ – needs are met through the program. The web survey measured teachers’ intentions to incorporate the lessons into their classroom teaching, and phone interviews documented the extent to and ways in which teachers actually did extend the program experience back into the classroom.

Data from the web survey suggested that teachers had relatively high intentions of incorporating some aspect of the program back into the classroom. Data showed that 97% of teachers (n=37 out of 39) said they planned to read the featured story again in class. This is encouraging, as the NPM just started giving a copy of the book to each group for the 2007-2008 year. Apparently this is an effective way to extend the museum experience back into the classroom. In addition, 87% of the teachers (n=33) said they would have discussions with their students about the museum experience; about half of teachers (51%; n=19) planned to do activities and/or games related to the lesson; and half (50%; n=19) said they planned to talk about the art/craft activity. Only one teacher indicated that they did not plan to incorporate the lesson into their classroom teaching. (Note that it is possible that this was a chaperone or teaching assistant who did not have the authority to do so). (See Table 6).

**Table 6:** Teachers’ intention to incorporate lesson into classroom

<b>Activity</b>	<b>Arrow to the Sun (Nov)</b>	<b>Mailing May (Dec)</b>	<b>The Giant Hug (Jan)</b>	<b>Duke Ellington (Feb)</b>	<b>Amelia &amp; Eleanor Go for a Ride (Mar)</b>	<b>Owney the Dog (Apr)</b>	<b>Dear Juno (May)</b>	<b>Percentage total</b>
	<b>(n=5)</b>	<b>(n=4)</b>	<b>(n=5)</b>	<b>(n=7)</b>	<b>(n=7)</b>	<b>(n=5)</b>	<b>(n=5)</b>	<b>(n=39)</b>
Read story again in class	5	4	5	7	6	5	5	97%
Have discussions about museum visit	5	4	4	5	6	4	5	87%
Do activities/games related to lesson	4	2	4	6	5	4	0	50%
Talk about art/craft activity	5	1	2	2	4	1	4	50%
Display art/craft in classroom	2	2	2	1	5	3	1	42%
I do not plan to incorporate the lesson into the classroom	0	1	0	0	0	0	0	3%

For some of the lessons, teachers offered ways in which they had already incorporated the LLD program back into the classroom. (See Table 7). For example, following the January lesson, based on “The Giant Hug,” one teacher did an activity in which students wrote down who they would mail a hug to; another planned to have children write a story about the visit; and one teacher is posting documentation of each visit, including the activities and crafts they make, for parents to see. They hope this will spark conversation among children and parents about their visit to the Postal Museum.

**Table 7: Ways in which teachers incorporated LLD into classroom teaching (by lesson)**

<b>Arrow to the Sun (November)</b>
<ul style="list-style-type: none"> <li>• Have children write a story about the visit and follow-up with other art activities.</li> <li>• We let the clay pots dry and painted.</li> </ul>
<b>Mailing May (December)</b>
<ul style="list-style-type: none"> <li>• I posted a documentation of the visit and activities for parents to see. Hope they will revisit or at least eagerly talk about the experience with children.</li> </ul>
<b>The Giant Hug (January)</b>
<ul style="list-style-type: none"> <li>• As a writing activity have the students to write who they would mail a hug to. In addition our class is creating a mailbox as a follow-up to all their visits this school year and when it's completed they can mail hugs to each other.</li> <li>• We had a child crying because she wanted her mom, we sent giant hugs to her parents at work!!</li> </ul>
<b>Amelia and Eleanor Go for a Ride (March)</b>
<ul style="list-style-type: none"> <li>• Create a book from photos and student quotes from our visit</li> <li>• Place book in library center for children to read on their own</li> </ul>
<b>Dear Juno (May)</b>
<ul style="list-style-type: none"> <li>• Read each other our mail</li> <li>• Children spoke with their parents about the pictures when they received them in the mail!!</li> <li>• Complete a language experience story about our trip. Print a book incorporating pictures from our trip and the students dictated statements of the trip.</li> <li>• we already did an estimation survey with the children on how long each child thinks it will take for their mail to reach them</li> </ul>

In the phone interviews, teachers were asked to describe ways they had utilized the LLD program experience back in the classroom. Data showed that teachers do in fact use ideas, concepts, and materials from the LLD programs to enhance their classroom teaching. For example, several teachers mentioned revisiting and re-reading the books with students. Others created activities based on their Postal Museum visits. For example, one teacher turned an area of the classroom into a “post office,” complete with pencils, paper, and mailbags, as a way to integrate writing in a fun way: “We wrote letters to each other and delivered them.” Similarly, another teacher noted how they designed and constructed a mailbox for the classroom, set up a “schedule” of mail delivery, and wrote letters to each other and their parents.

### **Overall teacher satisfaction**

Teacher satisfaction was used one indicator for the success and effectiveness of the Listen, Look & Do program. If teachers are not satisfied with an experience, there are not likely to continue to utilize a resource

or recommend it to others. Data indicated that teachers who bring students to LLD are extremely satisfied with their experience. During the phone interviews, teachers were asked to rate their satisfaction of the overall program experience on four measures; on average, scores ranged from 8.55 to 10.00 on a 10-point scale, with 1 being “not at all” or “poor” and 10 being “definitely” or “excellent.” (See Table 8). All teachers gave the highest rating of 10 for the statement on their likelihood of recommending the program and their likelihood of bringing another class to the program in the future – clear indicators that the teachers felt the program was valuable and worthwhile.

Interestingly, teachers rated the Postal Museum a fair amount lower (mean=8.55) than the LLD program (means from 9.44 to 10). While only 9 teachers were interviewed, this still suggests an interesting and actually positive trend, which is that the Listen, Look and Do program clearly adds value to the Postal Museum itself. While teachers are less enthusiastic about the museum as a place to bring young students, they are extremely satisfied with what the program offers. This finding indicates that the specific museum is not as important as the structure, content, and nature of the program. One could then infer that some of the key principles used to create Listen, Look and Do could be as successfully applied to another Smithsonian or museum context. It is the program, and not the museum, that appeals most to teachers.

**Table 8:** Teacher satisfaction with the *Listen, Look & Do* program (overall)

Statement	N	Mean	Min	Max
Please rate the following statements from 1 to 10 (with 1 being “definitely not” or “poor” and 10 being “definitely” or “excellent”)				
How likely is it that you would recommend a colleague bring a class to LLD?	9	10.00	10	10
How likely is it that you would bring a class back for LLD another year?	9	10.00	10	10
To what degree were your expectations of the program met?	9	9.44	7	10
How would you rate the Postal Museum overall as a place to bring your students?	9	8.55	7	10

Survey data on teacher satisfaction with specific LLD programs confirmed the interview data. When asked to rate their overall assessment of different portions of a specific month’s program on a scale of 1 to 5 (with 1 being “poor” and 5 being “very much”), teachers on average rated items between 4.50 and 4.82. Highest ratings were given for the topic/content of the lesson, the art activity, variety of teaching methods, and their overall feeling about the quality of the lesson. No teacher rated an item lower than “3” on the 5-point scale (See Table 9 below). Overall, we see a “ceiling effect” in which teachers are highly satisfied with the Listen, Look & Do program across the board.

**Table 9:** Teacher satisfaction with aspects of the *Listen, Look & Do* lessons overall

Statement	N	Mean	Min	Max	Std. Dev.
(Please rate your overall feelings about the following aspects of today's program...with 1 being "poor" and 5 being "very much")					
Story time	38	4.50	3	5	0.604
Museum/gallery tour	37	4.57	3	5	0.689
Art/craft activity	38	4.74	3	5	0.554
Topic/content of the lesson	38	4.82	4	5	0.383
Variety of teaching methods	38	4.71	3	5	0.515
My overall feeling about the lesson	37	4.70	4	5	0.463

Researchers also analyzed data by program month, though the sample sizes are too low to make statistical comparisons across the lessons. Overall, data showed that teachers were highly satisfied with each individual lesson; and nothing indicates that one lesson is particularly better or more effective than the others. However, it is interesting to note that "Owney the Dog" (April) had the lowest mean of all the programs in terms of museum/ gallery tour and art/craft activity. On the other hand, "Dear Juno" (May) received the highest mean ratings for all components, with the exception of variety of teaching methods (See Table 10). It is important to keep in mind, however, that these means reflect a high level of satisfaction (all above 4), suggesting that teachers are extremely satisfied with all aspects of each lesson and that there is no reason to be concerned about any particular lesson.

**Table 10:** Teacher satisfaction with *Listen, Look & Do* lessons (by lesson)

Statement	Arrow to the Sun (Nov)	Mailing May (Dec)	The Giant Hug (Jan)	Duke Ellington (Feb)	Amelia & Eleanor Go for a Ride (Mar)	Owney the Dog (Apr)	Dear Juno (May)
(Please rate your overall feelings about the following aspects of today's program...with 1 being "poor" and 5 being "very much")							
	Mean (n=5)	Mean (n=4)	Mean (n=5)	Mean (n=7)	Mean (n=7)	Mean (n=5)	Mean (n=5)
Museum/gallery tour	4.60	4.50	4.40	4.29	4.71	4.50	5.00
Art/craft activity	5.00	5.00	4.80	4.71	4.71	4.00	5.00
Topic/content of the lesson	4.60	5.00	5.00	4.86	4.71	4.60	5.00
Variety of teaching methods	4.80	4.75	4.60	4.86	4.86	4.40	4.60
My overall feeling about the lesson	4.80	4.75	4.60	4.57	4.86	4.40	5.00

Overall, data on teachers' perceptions of the Listen, Look & Do program confirm that the program is seen as highly enjoyable, appealing, and appropriate for the teachers and students it is aiming to reach.

Teachers feel that they are supported in their classroom teaching, that the program engages their students, and that it provides an enriching, age-appropriate museum experience for children, some of whom may not otherwise experience a museum at such a young age. Their overall satisfaction with LLD is important indication that the program serves them well. Specific program elements appreciated by teachers were the diversity of learning styles engaged, the hands-on and interactive nature of activities, the combination of a routine or structure (which increased familiarity and comfort) and the changing content (which kept students interested and engaged), and the relevance of the program to their teaching goals and standards. These are elements that could be transferable to any pre-K museum program, regardless of the content or type of museum.

## **To what extent are the specific goals of each month's program being met?**

### ***General assessment of programmatic goals***

While the study did not include a detailed analysis of each month's program objectives, data from the monthly survey clearly indicate that the lessons are successful and effective from the teachers' standpoint. Each lesson was positively received on all measures, and there are no red flags for NPM to be concerned about. All lessons seem to contribute to the LLD program's overall goals of engaging students in diverse ways of learning, creating a playful and explorative environment, and increasing students' comfort and familiarity in a museum context.

Focused observations of four program lessons (out of eight offered total), along with a document analysis of the accompanying lesson plans, do offer additional information on the effectiveness of LLD in achieving specific program objectives. The programs observed were October 2007 (Roberto Clemente), December 2007 (Mailing May), February 2008 (Duke Ellington), and May 2008 (Dear Juno). While the observations will be discussed in more detail in the next section, which focuses on the case study, some of the data is useful here.

Overall, data from observations and document analysis indicate that some of the specific goals of the LLD lessons may be too ambitious for the target audience of pre-K students. For example, some of the concepts are simply too difficult for most 4-5 year olds to grasp, such as the notion of "recognizing and accepting difference in themselves and others." (October 2007, Roberto Clemente lesson). This is a higher order thinking skill that cannot be expected at this developmental stage. While most students were able to recall who Roberto Clemente was and what he did (play baseball), none were able to say why he was different or how they themselves might be "different." In fact, children at this stage may be more comfortable fitting in and conforming to their environment than in being unique or different.

In most cases, there were simply too many goals to be accomplished in one lesson. For example, there were six goals identified for the May program. NPM staff may want to consider limiting the number of goals for a lesson, which would allow them to focus activities more closely around 1 or 2 goals and thus increase the likelihood of being able to achieve them. In addition, there were often too many objectives for each lesson, ranging from three to six for each. These objectives were often extremely specific, such as being able to name or identify a certain number of elements – for example, "2 unique aspects of Asian heritage" or "3 of

their favorite places or things” (May 2008, Dear Juno lesson). From an evaluation perspective, it is difficult to measure the success of goals and objectives that are too ambitious and/or too specific. For example, if students can only name one aspect of Asian heritage, the programmers would likely not consider this a failure; rather, an unrealistic goal has been set.

It may also be useful to frame goals and objectives of the lessons in more general terms, rather than basing them on specific content. Ultimately, Listen, Look & Do hopes that students will learn, reinforce, and practice cognitive skills (such as naming, identifying, counting, noticing patterns, comparing), but it may not be as important that students are able to do this with specific content. While the content of each program of course provides the means for teaching and reinforcing these skills, if content-based goals are included in the objectives, it can be very difficult to measure their success. Rather, providing different content and themes each month creates a diverse and engaging program, but the overall objectives are not content-based.

### ***Specific assessment of programmatic goals (by lesson)***

This section draws upon data from case study follow-up interviews to document the extent to which specific learning goals were being met each month. While many of the lesson’s goals were difficult to measure (see above section), researchers did include specific questions in the follow-up interviews to assess the extent to which students were absorbing and retaining some of the key points of each lesson. Overall, data suggested that students were able to grasp and retain some of the key points and messages each month, and that there was some improvement over time. (However, this is more likely due to general cognitive development over the course of the year than with the LLD program, given the small amount of time spent at NPM compared to other learning experiences.)

As the most basic measure, researchers gathered data on the students’ ability to recall the story in addition to a couple of specific objectives for each of the four lessons observed. Data showed that students had a moderate ability to recall the content of the story. Students’ responses were rated on a scale from 0 to 3, with “0” meaning they could not recall the story at all, and a “3” meaning they could recall the story in great detail. Overall, means were relatively low<sup>i</sup>, ranging from 1.07 (December 2007, Mailing May) to 1.5 (February 2008, Duke Ellington). The mean for October/Roberto Clemente was 1.38, and the mean for May/Dear Juno was 1.36.

Students were also prompted to answer questions specifically related to that month’s objectives (See Table 11). Data showed that students had some difficulty describing Roberto Clemente’s feelings after the October 2007 lesson. More than half (54%; n=7) could not do so, and about one third (31%; n=4) could only describe his feelings in a basic or vague way. Students had an easier time describing why Roberto Clemente was special, with almost half (46%; n=6) being able to describe them with moderate detail (e.g. he was happy because he won at baseball; or he was sad because people “called him names”); though half 54% (n=7) could not answer this question at all. Students also had difficulty transferring the concept of being “special” to themselves. One third (31%; n=4) could not do so at all; another third (39%; n=5) made basic or vague responses to why they were special or unique; and another third (31%; n=4) gave a moderately detailed answer. However, students most often described something about themselves that was either similar to other

children (e.g. “I like to play with my friends”) or similar to the main character in the story (e.g. “I play basketball.”). So results should be interpreted with some caution.

Students demonstrated a greater ability to identify a character’s feelings after the December lesson (“Mailing May”). Here, 58% (n=8) were able to give a basic or moderately detailed response (e.g. she was happy to see her grandmother, or she was sad because she couldn’t get a job to earn money, or she was angry because she had to go to sleep early). However, students had more difficulty explaining what the train car was used for, with only about a quarter (23%; n=3) being able to give a basic explanation.

In February (Duke Ellington lesson), students demonstrated a very high recall of who Duke Ellington was and what he did (such as playing piano, being in a band, traveling around the country). Only two children were not able to recall anything about Duke Ellington, and 50% (n=7) gave a moderate or very detailed response. Based on observations of this lesson, students were highly engaged throughout, which likely led to their ability to recall information later. The elements of music, being able to play instruments, and perhaps the fact that Duke Ellington was a successful African American (all but one of the students were African American), all likely contributed to their interest and engagement in the topic.

Finally, the May interviews (Dear Juno lesson) showed that students grasped the basic concept of why mail is used (e.g., for communicating with others). Only 14% (n=2) could not describe why or how Juno used the mail; almost half (43%; n=6) described this with moderate or high levels of detail (e.g. to write to his grandmother, including some of the specific items and pictures they sent to each other). The vast majority (85%; n=12) were able to explain what the mail is used for on some level, though it is possible they have also learned about the mail in other contexts (school, home, etc.).

**Table 11:** Extent to which specific lesson objectives were achieved

<b>Selected lesson objectives</b>	<b>Percentage</b>
<b>October 2007 (Roberto Clemente)</b>	<b>N=13</b>
Ability to describe and explain Roberto Clemente’s feelings	
<i>Not at all</i>	54%
<i>Basic or not accurate</i>	31%
<i>Moderately detailed, accurate</i>	8%
<i>Very detailed, accurate</i>	8%
Ability to describe why Roberto Clemente was special	
<i>Not at all</i>	54%
<i>Basic or not accurate</i>	0%
<i>Moderately detailed, accurate</i>	46%
<i>Very detailed, accurate</i>	0%

Ability to describe why they (the student) are special	
<i>Not at all</i>	31%
<i>Basic or not accurate</i>	39%
<i>Moderately detailed, accurate</i>	31%
<i>Very detailed, accurate</i>	0%
<b>December 2007 (Mailing May)</b>	<b>N=14</b>
Ability to describe and explain May's feelings	
<i>Not at all</i>	36%
<i>Basic or not accurate</i>	29%
<i>Moderately detailed, accurate</i>	29%
<i>Very detailed, accurate</i>	7%
Ability to describe what the train car is used for	
<i>Not at all</i>	54%
<i>Basic or not accurate</i>	23%
<i>Moderately detailed, accurate</i>	15%
<i>Very detailed, accurate</i>	8%
<b>February 2008 (Duke Ellington)</b>	<b>N=13</b>
Ability to recall who Duke Ellington was, what he did	
<i>Not at all</i>	14%
<i>Basic or not accurate</i>	36%
<i>Moderately detailed, accurate</i>	36%
<i>Very detailed, accurate</i>	14%
Ability to describe how they felt in the museum	
<i>Not at all</i>	54%
<i>Basic or not accurate</i>	39%
<i>Moderately detailed, accurate</i>	8%
<i>Very detailed, accurate</i>	0%
<b>May 2008 (Dear Juno)</b>	<b>N=13</b>
Ability to recall what Juno used the mail for	
<i>Not at all</i>	14%
<i>Basic or not accurate</i>	43%
<i>Moderately detailed, accurate</i>	29%
<i>Very detailed, accurate</i>	14%
Ability to explain what mail is used for in general	
<i>Not at all</i>	15%
<i>Basic or not accurate</i>	31%
<i>Moderately detailed, accurate</i>	46%
<i>Very detailed, accurate</i>	8%

Overall, data indicated that students are getting some of the basic messages of each program lesson, but not to the extent or detail that one might hope for. It is more likely that the problem lies in finding

measurable indicators in this age group, though, rather than it not occurring at all. Again, it may be that the objectives were too cognitive in nature and thus were hard to measure with this age group, both for methodological reasons and because there are so many contributing factors to their cognitive development over the course of a year. This does not mean the specific programmatic goals are not being achieved; but instead we have to assume that they are happening based on students' level of engagement and interest rather than on specific indicators. It is also important to recognize that the non-cognitive goals are equally if not more important to the LLD program and its overall success. (These are discussed in the next section).

Following are a few suggestions for improving the ability to meet specific lesson objectives:

- **Keep it simple** - Reduce number of goals and/or objectives considerably (1-2 per lesson) so that they are more easily accomplished and measured
- **Ensure that goals/objectives are age-appropriate** – While the activities for each lesson were very age appropriate, and often tailored to the needs of each class, the lesson plans tended to identify goals that were unrealistic or too abstract for 4 and 5 year olds.
- **Identify goals and objectives that are broadly applicable, and less tied to specific content of the story or theme** – While it is important to ground objectives in engaging and appealing content, the museum may want to consider framing its goals and objectives for Listen, Look & Do in broader terms. This way, it leaves room for the multiple ways in which students might achieve the objective.

## **How does a multiple visit experience of the Listen, Look & Do program impact students over time?**

This section draws upon data from the case study portion of the evaluation, as its primary purpose was to gain deeper insights into the impacts of a multi-visit experience of Listen, Look & Do on students over time, as well as to document the specific nature and outcomes of the program experience for students. The case study class is described in detail in the “Description of Samples” section (p. 5). The overarching evaluation questions are addressed in two ways: 1) Students’ perceptions and recollections of their museum visits, which serve as indicators of their **engagement and connection** to the museum; and 2) student’s perceptions of the Postal Museum over time, which indicates their level of **familiarity with the museum**.

### ***Students’ engagement and connection to the museum visits***

#### **Ability to recall and describe museum visits**

Researchers gathered data on what students remembered about what they did and saw during four (out of seven) visits the class made to the Postal Museum during the 2007-2008 year, primarily as an indicator for students’ levels of engagement and the nature of their connection to the Listen, Look & Do program. Data showed that most students were able to accurately recall what they experienced during their visits to the Postal Museum, suggesting that students were engaged and interested in the programs. In addition, their ability to recall and accurately describe the program experience increased somewhat over time, though it is

possible that this is due to their interest in each specific program, as well as general cognitive development throughout the year.

Two thirds (67%; n=9) of students during the first assessment (October 2007) drew a picture related to their museum experience, while all but one student was able to do so during the third assessment (February 2008). The numbers went back down for the last assessment (May 2008), which could be due to slightly lower interest in that month's program.<sup>6</sup> Students were also increasingly able to recall and describe the current museum visit over the course of the school year. During the first two months, students were more likely to focus on a previous program experience, with nearly two-thirds (62%; n=9) doing so for the second assessment; on the other hand, none of the students referred to a previous visit during the last two assessments (February 2008 and May 2008). In fact, 93% (n=14) of students made reference to the current visit in February 2008, and 78% (n=11) for the May 2008 visit (See Table 12).

**Table 12:** Students' ability to recall and describe LLD program visits over time

	<b>October 2007 (n=13)</b>	<b>December 2007 (n=14)</b>	<b>February 2008 (n=15)</b>	<b>May 2008 (n=14)*</b>
<b>Content of picture related to museum?</b>				
Yes	67%	78%	86%	79%
No	33%	20%	7%	21%
<i>Partially, unclear</i>	0%	2%	7%	0%
<b>Description of museum visit (what they did, saw) related to museum? **</b>				
<i>Yes – related to current visit</i>	70%	46%	93%	78%
<i>Yes – related to previous visit(s)</i>	20%	62%	0%	0%
<i>Partially, unspecific</i>	20%	31%	20%	22%
<i>No – not related to museum visit</i>	0%	8%	0%	11%

\* Total Ns vary from month to month due to absences or inability to participate in the field trip and/or follow-up interview

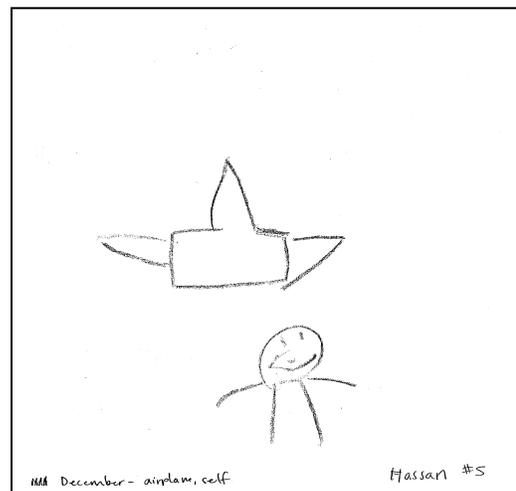
\*\* Note that some totals are more than 100% because children gave multiple responses

When students were asked to draw what they remembered from their program experiences, data showed that they were most focused on: the museum context and setting, including the building itself, classroom, stairs, chairs and tables, etc; the social aspect of the experience, such as friends, classmates, their teacher, the museum educator, and sometimes the researcher<sup>7</sup>; and objects/exhibits in the museum, most notably the airplanes, train car, mail truck, and forest. For one of the programs (February 2008), children were also highly

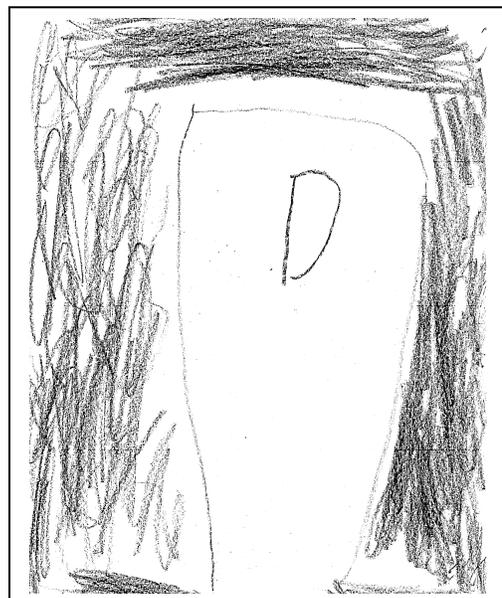
<sup>6</sup> Another confounding factor for the May assessment was that students had visited the National Zoo between the Postal Museum visit and the researcher's classroom visit, which took place two days later. Several students confused the two trips and focused on their zoo experience in both the drawing and the description of their experience.

<sup>7</sup> This data may be slightly biased because it was the researcher asking the children to draw pictures of their museum visit, and since she was also present on the four museum visits, some students may have been more likely to include the researcher in their drawing than had she not been present for the follow-up activity.

likely to draw about an activity, most likely because that lesson included playing instruments and dancing to jazz music, which students highly enjoyed and remembered quite clearly.



**Figure 1: Student drawing of Postal Museum Visit, December 2007 (student and an airplane).**



**Figure 2: Student drawing of Postal Museum Visit, May 2008 (“the train”)**

Data from student responses to the question, “What do you remember seeing or doing at the museum this week?” showed higher emphasis on objects/exhibits and activities – rather than the museum context or social factors – likely due to the specific nature of the question. (See Table 13 below). Previous research in this area suggests that children tend to recall large-scale exhibits quite readily in all types of museums, particularly when they are associated with kinesthetic and/or tactile experiences (Anderson et al. 2002, Piscitelli & Anderson 2001).

Overall, these findings suggest that the students were very capable of recalling specific elements they had seen or done during their visit, indicating a high level of engagement in the program experiences. Students particularly were more capable of relating to the current museum visit (rather than a previous visit) over the course of the year.

**Table 13: What students remember about their LLD program visits over time**

	<b>October 2007 (n=10)</b>	<b>December 2007 (n=13)</b>	<b>February 2008 (n=15)</b>	<b>May 2008 (n=9)<sup>*</sup></b>	<b>TOTAL (n=47)</b>
<b>Description of drawing <sup>**</sup></b>					
<i>Traveling to museum</i>	0%	7%	0%	7%	4%
<i>Museum context, setting, experience</i>	17%	14%	36%	36%	26%
<i>Social component (teacher, friends)</i>	33%	36%	36%	29%	33%
<i>Objects or exhibits</i>	17%	36%	7%	29%	22%
<i>Activities</i>	8%	7%	29%	14%	15%
<b>Description of museum visit (what they did, saw) related to museum? <sup>**</sup></b>					
<i>Traveling to museum</i>	0%	15%	0%	0%	4%
<i>Museum context, setting, experience</i>	30%	8%	27%	22%	21%
<i>Social component (teacher, friends)</i>	0%	23%	7%	22%	13%
<i>Objects or exhibits</i>	60%	62%	40%	78%	57%
<i>Activities</i>	60%	77%	93%	33%	70%

<sup>\*</sup> Total Ns vary from month to month due to absences or inability to participate in the field trip and/or follow-up interview; numbers also vary because this table only includes students who were able to accurately recall the museum experience

<sup>\*\*</sup> Note that some totals are more than 100% because children gave multiple responses. Students gave 1.22 responses on average when describing their picture, and 1.66 responses on average when describing what they saw or did at the museum that month.

### **What students liked best about the museum visits**

Researchers also documented what students said they enjoyed most about each visit as a way of measuring which specific aspects of the program resonated with students the most. Similar to data on what students recalled about their visits, data showed that students for the most part could accurately recall something they enjoyed most about the program. In addition, their ability to recall something relevant to the museum experience increased over time. During the first assessment (October 2007), one third of the students (n=4) offered an example not related to the museum visit (such as seeing Power Rangers or eating candy). By the fourth assessment, all students gave a response related to the Postal Museum. (See Table 14 below).

**Table 14:** Students' favorite aspect of the LLD and program (by month)

	October 2007 (n=13)	December 2007 (n=14)	February 2008 (n=15)	May 2008 (n=14)*
<b>Was their favorite part of visit related to museum?</b>				
Yes – related to current visit	58%	55%	87%	92%
Yes – related to previous visit(s)	8%	27%	14%	8%
No - not related to museum visit	33%	18%	7%	0%

\* Total Ns vary from month to month due to absences or inability to participate in the field trip and/or follow-up interview; numbers also vary because this table only includes students who were able to accurately recall the museum experience

\*\* Note that some totals are more than 100% because children gave multiple responses. Students gave 1.22 responses on average when describing their picture, and 1.66 responses on average when describing what they saw or did at the museum that month.

When coded for content, data suggested that students most enjoyed objects/exhibits, with more than half (56%; n=31) giving this response overall. (See Table 15). Confirming feedback from teachers, students often mentioned large-scale objects, such as the airplanes, mail truck, and train car, as favorite aspects of their museum visit, along with large-scale exhibits such as the Forest. This is not surprising, as children were also highly likely to remember these types of objects and exhibits when asked to describe what they saw or did, suggesting that they had a significant impact on students' memories. What students liked the most stayed relatively stable over time, and is likely much more a function of the specific program experience. For example, the February program included an activity that children found highly enjoyable -- playing musical instruments and dancing.



**Figure 3:** Student drawing of Postal Museum Visit, February 2008 (Angel and Dayani dancing together)



**Figure 4:** Student drawing of Postal Museum visit – “picking a book, tables, kids, playdough” (December 2007)

**Table 15:** What students liked most about the LLD program visits over time

	October 2007 (n=8)	December 2007 (n=9)	February 2008 (n=13)	May 2008 (n=13)*	TOTAL (n=43)
<b>What students liked best about the museum visits **</b>					
<i>Traveling to museum</i>	0%	11%	0%	0%	2%
<i>Museum context, setting, experience</i>	13%	0%	15%	8%	9%
<i>Social component (teacher, friends)</i>	25%	0%	15%	8%	12%
<i>Objects or exhibits</i>	50%	33%	15%	46%	35%
<i>Activities</i>	25%	67%	77%	46%	56%
<i>Affective, having fun</i>	0%	0%	8%	0%	2%

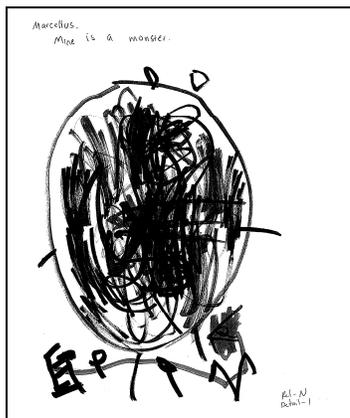
\* Total Ns vary from month to month due to absences or inability to participate in the field trip and/or follow-up interview; numbers also vary because this table only includes students who were able to give an accurate response to what they liked best

\*\* Note that totals are more than 100% because children gave multiple responses. Students gave 1.16 responses on average when describing what they liked best about the museum visit.

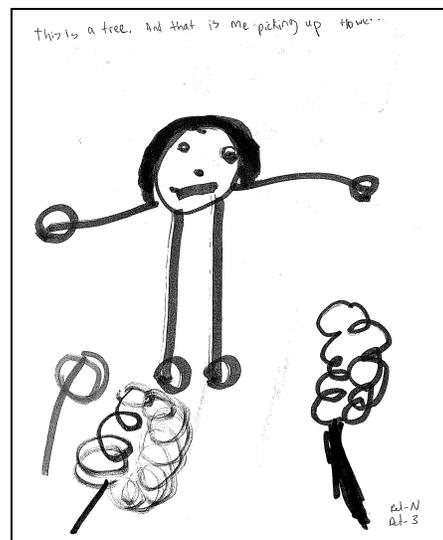
### ***Students' familiarity in the museum***

One of the primary goals of the Listen, Look & Do program, as suggested by NPM staff, was to increase children's familiarity and comfort within the museum environment. Data from the case study showed that the program was highly successful on this measure. Students showed a significant gain in their ability to articulate (either through drawing or words) what a museum is, suggesting increased familiarity with the museum (See Table 16). It is interesting to note, however, that students perceived of a "museum" solely in terms of the Postal Museum, which is completely appropriate to the cognitive and developmental stage of 4 to 5 year olds. That is, data showed they are not yet able to move beyond the concrete experience of the Postal Museum to extrapolate the more abstract concept of a "museum". However, it is likely that if they were to experience other museums, they would begin to make connections and develop a stronger understanding of museums more generally.

#### **Pre-program drawings of "museum" (unrelated)**



**Figure 5:** Pre-program drawing of "museum" – "Mine is a monster" (October 2007)



**Figure 6:** Pre-program drawing of "museum" – "This is a tree, and that is me picking up flowers." (October 2007)

Students were also more likely to give a fair or moderately detailed description of their drawing of a museum in the post-test; whereas the vast majority (79%; n=11) gave a very basic description (1 to 2 words) in the pre-test. However, one should interpret this result with caution, as students' verbal abilities naturally increased throughout the course of the school year due to factors unrelated to their museum experience.

**Table 16: Students' familiarity with the museum over time**

	<b>Pre-test - October 2007</b>	<b>Post-test - May 2008</b>
	<b>(n=14)</b>	<b>(n=14)</b>
<b>Was drawing related to museums?</b>		
Yes	14%	57%
No	71%	7%
<i>Partially or unclear</i>	14%	36%
<b>How detailed was description of a museum?</b>		
<i>Basic</i>	79%	7%
<i>Fair</i>	14%	50%
<i>Moderately detailed</i>	7%	36%
<i>Very detailed</i>	0%	7%

As only four of the students drew a picture related to a museum in the pre-test, data on the content of students' descriptions of museums will only be reported for the post-test. The post-program data shows how students came to perceive of museums, and the Postal Museum specifically, after spending one school year participating in the Listen, Look & Do program. Not surprisingly, students primarily perceived of the museum as a social experience, with the vast majority (71%; n=10) including some type of social element in their drawings and descriptions in response to the question, "What do you think of when you hear the term 'museum'?" Almost a third of the students focused on the museum context (29%; n=4) or objects/exhibits (29%; n=4). (See Table 17).

**Table 17: Students' associations with the museum (post-test)**

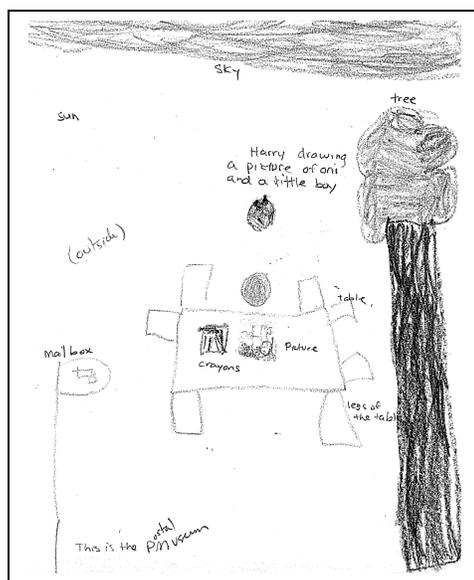
	<b>Post-test - May 2008 (n=14)</b>
<i>Traveling to the museum</i>	7%
<i>Museum context, setting</i>	29%
<i>Social components</i>	71%
<i>Objects, exhibits</i>	29%
<i>Activities</i>	21%
<i>Affective/feeling</i>	7%
<i>Unrelated to museums</i>	29%

\*\* Note that total equals more than 100% because children gave multiple responses. Students gave, on average, 1.93 responses when describing associations with the word "museum"

**Post-program drawings of "museum" (related)**



**Figure 7:** Post-program drawing of museum (related – social component, exhibit) – “Ms. Elgort and friends in the forest.” (May 2008)



**Figure 8:** Post-program drawing of museum (related – activity, museum context). “Harry drawing a picture of Oni [sic] and a little boy” (May 2008)

In sum, several key trends emerged from the case study data:

- **Students significantly increased their understanding of and familiarity with museums –** The Listen, Look & Do program clearly provided youngsters with the opportunity to explore and become familiar and comfortable within a museum context. While they were not yet able to transfer this knowledge to a more abstract concept of what a museum is, they clearly came to know and understand the elements of the Postal Museum specifically.

- **Students are highly engaged in the program** – Across all programs included in the case study, children demonstrated moderate to high interest and engagement in the program. For the most part, students were able to recall details of what they saw and did at the museum, which suggests that they were engaged in the experience. While it is difficult to measure specific learning outcomes, environments that encourage high levels of engagement and interest are most conducive to student learning.
- **Students are highly focused on large-scale objects and exhibits** – Whether or not these objects were specifically incorporated into a lesson, children often talked about the forest, airplanes, train, and mail truck when describing what they remembered seeing or doing at the museum, or what they like best about their museum visits. This is not surprising, as these are large, unusual objects/experiences that they are not likely to have elsewhere. Thus, these stick out in children’s minds and help create memories and connections to place. (Anderson et al. 2004, Piscitelli & Anderson 2000).
- **Students perceive museums as highly social experiences** - In their post-test drawings and descriptions of what they associate with the term “museum,” students were highly focused on the social aspect of the experience – often mentioning their friends, classmates, teacher, and even the researcher. Students also included social components in their drawings and descriptions of specific program experiences, but not as extensively.
- **The topic and activities of a lesson may impact interest and engagement more than the number of times children visit** - The Duke Ellington lesson, which took place in February 2008, showed the highest levels of recall, most accurate recollections, and highest ability to recall what they did. Observations also showed that students were highly engaged in the activities of this lesson; thus, the students would likely have shown similar levels of recall regardless of when this lesson took place. Further, recall levels and engagement for the Roberto Clemente lesson were almost as high, even though this was only the second visit. Boys in particular remembered this lesson well because Roberto Clemente was a baseball player and boys may have higher exposure to and interest in baseball.

## CONCLUSIONS

The Listen, Look & Do program clearly provides an enriching, engaging, and playful environment that supports young children in becoming familiar and comfortable in a museum environment, and practicing important cognitive, motor, and social skills outside the classroom. Teachers also benefit from bringing their students to the program, as it is clearly well-organized, designed to support classroom teaching goals, and highly relevant to standards of learning in DC, Maryland, and Virginia. Following are key findings of the study:

Familiarity and comfort – The study showed that Listen, Look, and Do was successful in one of its key overarching goals, which was to support young children in feeling comfort and familiarity in the museum environment. As many teachers pointed out, the combination of having a structure/routine reduces distraction or “novelty effect” in the children, while the variation in content and activities within a lesson and throughout the year holds their attention and interest. Another contributing factor is that the program draws upon activities that are familiar to students from school or other contexts, such as story time and art activities, which helps them feel a sense of comfort and “control” over their environment. Finally, having a dedicated instructor/educator for the program also seems to be an important factor in promoting comfort and familiarity for repeat visit classes.

Playful, exploratory environment – Another main goal of the LLD program was to promote play and exploration in a structured, “safe” context. The study showed that the program was successful on this measure, as many teachers were most pleased with the program’s use of multiple learning styles (visual, auditory, kinesthetic, and even olfactory). They felt this not only allowed each child to experience the museum in multiple ways, but that it created opportunities to engage a wide range of learners. Some teachers, however, wanted more unstructured time for students to explore and experiment, such as by freely exploring materials or objects rather than being directed.

Supports classroom teaching – The LLD program is clearly seen by teachers as supporting their classroom goals and curriculum, another key goal of the program. Many teachers commented on how the program supports what they are trying to do in the classroom, ranging from cognitive skills, such as identifying shapes, colors, and numbers, and pattern recognition; to social and behavioral skills, such as listening to and feeling empathy for others. Some teachers specifically noted that the program supports DC standards of learning, which they particularly appreciated.

Students perceive museum experience as largely social – The case study showed that students largely conceive of the museum as a social experience – which is to be expected given their developmental stage, and the fact that their visits were indeed a social experience with their friends, classmates, and teachers. While other elements also stayed with the case study students over time, the majority included a social element when expressing their perceptions of the museum.

Large-scale objects/exhibits engage students – Students are highly engaged by the large-scale objects and exhibits they experienced at the Postal Museum. Memories of the forest, train car, mail truck, airplanes, and

the Pony Express stayed with the children over the course of the year as positive experiences. It is highly encouraging that students developed strong connections to specific museum components—suggesting that they were highly engaged at the museum. There is some evidence to suggest that these initial powerful experiences may encourage future museum visitation.

Exposure to museums – The LLD program offers young children a unique opportunity to learn in an environment they might not normally experience—particularly for classrooms that come from low SES communities, which tend to utilize museums less than other socioeconomic groups. Teachers repeatedly commented on the value of bringing children out of the classroom, out of their daily lives, and seeing more of their community. While “exposure” is sometimes seen as not being enough of an outcome, one should not underestimate the power of experiencing a new, enriching environment. Interestingly, the case study indicated the children develop a strong association with a specific place (i.e. the Postal Museum), rather than a more abstract understanding of what a museum is. However, this is developmentally appropriate; also, it is likely that they will build on this initial museum experience through any future visits to other museums they might take.

Effective programming is more important than content of museum – This study suggests that it is the nature of the LLD program that adds value to the museum, rather than the other way around. Teachers were more enthusiastic about the program itself – the type of activities, the variety of learning opportunities, the structure, etc. – than about the Postal Museum specifically. While teachers certainly found the NPM to be an appropriate and interesting place for young children, data suggested that the essential elements of the program could be transferred to other museum contexts without losing value for teachers and students.

## REFERENCES

- Anderson, D, et. al. (2002). Children's Museum Experiences: Identifying Powerful Mediators of Learning. *Curator* 45(3): 213-30.
- Clark, A. (2004). The Mosaic Approach and Research with Young Children. In V. Lewis et. al., eds. *The Reality of Research with Children and Young People*. Thousand Oaks, CA: Sage Publications, Inc.
- Coates, E. (2002). "I forgot the sky!" Children's stories contained within their drawings. *International Journal of Early Years Education*, 10(1): 21-35.
- Falk, J. H. & Dierking, L. D. (2000). *Learning from museums: Visitor experiences and the making of meaning*. Walnut Creek, CA: Alta Mira Press.
- Falk, J. H., & Dierking, L. D. (1997). School field trips: Assessing their long-term impact. *Curator*, 40(3), 211-218.
- Finson, K. D., & Enochs, L. G. (1987). Student attitudes toward science-technology-society resulting from visitation to a science-technology museum. *Journal of Research in Science Teaching*, 24(7), 593-609.
- Greene, S. & Hogan, D., eds. (2005). *Researching Children's Experience: Approaches and Methods*. Thousand Oaks, CA: Sage Publications Inc.
- Jensen, N. (1994). Children's perceptions of their museum experiences: A contextual perspective. *Children's Environments*, 11(4), 300-324.
- NAEYC. (1996). Developmentally Appropriate Practice in Early childhood Programs Serving Children from Birth through Age 8. Position statement. Washington, DC: National Association for the Education of Young Children.
- NAEYC & NAECS/SDE. (2003). Early Childhood Curriculum, Assessment, and Program Evaluation. Position Statement. Washington, DC: National Association for the Education of Young Children and the National Association of Early Childhood Specialists in State Departments of Education.
- Nutbrown, C. (2006). *Threads of Thinking: Young Children Learning and the Role of Early Education, Third Edition*. Thousand Oaks, CA: Sage Publications Inc.
- Piscitelli, B. and Anderson, D. (2000). Young Children's Learning in Museum Settings. *Visitor Studies* 3(3), 3-10.

**APPENDIX A: ONLINE TEACHER SURVEY**

# Listen, Look & Do "Dear Juno" Survey (May program)

Dear Teacher or Caregiver,

Thank you for agreeing to respond to this brief survey -- your thoughts are extremely important to us. The survey should take about **5 minutes** to complete; we ask that you please try to submit the survey within **one week** of receiving it. Once you have submitted the survey, you will automatically be entered in our monthly raffle to win a **\$25 gift certificate from Amazon.com** (even if you have won in previous months).

We encourage you to be open and honest in your responses, as negative feedback can be just as valuable as positive feedback. Your survey responses will be kept confidential through a third party, the Institute for Learning Innovation.

If you have any problems with completing the survey, please email Jill Stein at [stein@ilinet.org](mailto:stein@ilinet.org) for assistance.

Thanks again for your participation!

Nicole, Jeff and Allison  
The "Listen, Look, and Do" team

**1) Name (first and last):**

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**2) Name of school or organization:**

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**3) Please rate your overall feelings about the following aspects of the "Dear Juno" (May) Listen, Look & Do program on a scale of 1 to 5, with 1 being "Poor" and 5 being "Excellent":**

	1 (Poor)	2	3	4	5 (Excellent)
Story time	<input type="radio"/>				
Museum/gallery tour	<input type="radio"/>				
Art/craft activity	<input type="radio"/>				
Topic/content of the lesson	<input type="radio"/>				
Variety of teaching methods (e.g., movement, play, hands-on, manipulation, etc.)	<input type="radio"/>				
My overall feeling about the lesson	<input type="radio"/>				

4) What aspect of the "Dear Juno" lesson did you feel was most valuable/beneficial for your students? Why?

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5) Thinking about your students' experience of the whole "Dear Juno" lesson -- including story, gallery visit, and art activity -- please rate the following statements from 1 to 5, with 1 being "Not at all" and 5 being "Very much":

	1 (Not at all)	2	3	4	5 (Very much)
My students enjoyed this lesson	<input type="radio"/>				
My students were engaged and interested in the topic and activities	<input type="radio"/>				
My students learned something new during their visit	<input type="radio"/>				
The lesson helped my students reinforce knowledge or skills they already have or are developing	<input type="radio"/>				
My students felt comfortable in the museum during this lesson	<input type="radio"/>				

6) In what ways was this lesson relevant to your teaching (for example, standards, goals, curriculum, topics, skills)?

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7) Please offer one suggestion for improving the "Dear Juno" (May) lesson:

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8) In what ways do you plan to incorporate the "Dear Juno" *Listen, Look & Do* lesson into your teaching? (check all that apply)

- Have discussions about the museum visit
- Read the story again in class
- Talk about their art/craft project
- Display their art/craft project in the classroom
- Do activities and/or games related to the lesson
- I do not plan to incorporate this lesson into my classroom teaching
- Other (please specify)

If you selected other, please specify

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**9) If you do not plan to incorporate the "Dear Juno" (May) lesson back in your classroom, can you please explain why not below?**

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**10) Do you have any other thoughts or comments you would like to share about this lesson? (optional)**

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Thank you for your feedback. We really appreciate your time and support in this effort!

**APPENDIX B: TEACHER INTERVIEW INSTRUMENT AND PROTOCOL**



**National Postal Museum**  
***Listen, Look & Do* Program Evaluation**

**Data Collection Protocols and Instrument**  
**for Teacher Phone Interviews**

Jill Stein  
Institute for Learning Innovation  
Edgewater, MD

May 2008

## ***LISTEN, LOOK & DO* PROTOCOLS & INSTRUMENT FOR TEACHER PHONE INTERVIEWS**

### **Overview**

The purpose of this portion of the study is to get overall feedback from teachers and caregivers who brought students to the *Listen, Look & Do* program at the National Postal Museum during the 2007-2008 year. Researchers will aim to gather teachers' input on their satisfaction with the program, the value and benefit of the program for young children, and ways in which the program might better serve the needs of students and teachers.

Data will be collected through in-depth, semi-structured phone interviews conducted by an ILI researcher, using the Interview Guide below. Teachers and caregivers will be recruited by National Postal Museum staff using the Recruitment Script below (either via phone or email). ILI researchers will attempt to reach all teachers who have agreed to participate in the study. If they are not able to connect with the teacher after three tries, the teacher will be removed from the sample.

### **Recruitment script**

A National Postal Museum staff member will recruit teachers to participate in the study either by phone or email. They will say/write something like the this:

“Thank you so much for your participation in the *Listen, Look & Do* program this year. It has been a pleasure having you at the National Postal Museum, and we enjoyed getting to know you and your students.

As some of you are aware, we are in the process of evaluating *Listen, Look, & Do* in order to keep improving the program and making it the best possible experience for pre-K students and their teachers. Many of you have helped us greatly throughout the year by completing surveys online following each of your visits. Your feedback has been invaluable in helping us better understand the effectiveness of the program and how we might improve it. So thank you for your time and input!

As a final step in the evaluation, our research and evaluation firm, the Institute for Learning Innovation (ILI), would like to conduct a brief phone interview with you to find out what you think about the program as a whole, how you feel it impacted you and your students, and how we might better serve the needs of teachers and students in the future. Whether you've been to one program or all nine, your feedback is very important to us.

The calls would take place in May at your convenience, and would last about 10-15 minutes. What are the best days/times to reach you in May? What is the best phone number to reach you at? Are there any days/times where you are NOT available?

Thank you so much for your time and input into this important process.  
We really appreciate it!”

The National Postal Museum will then provide ILI with a list of teachers who have agreed to be contacted, including the best time(s)/day(s) and phone number to reach them at.

# National Postal Museum

## *Listen, Look & Do* Teacher Interview

Teacher name: \_\_\_\_\_ School: \_\_\_\_\_ # of visits: \_\_\_\_\_

Interviewer: \_\_\_\_\_ Date: \_\_\_\_\_

Time start/stop: \_\_\_\_\_ / \_\_\_\_\_ Total time: \_\_\_\_\_

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### Introduction

“Hi, my name is \_\_\_\_\_, and I’m working with the National Postal Museum to help them better understand what teachers think about the *Listen, Look & Do* program.. They indicated that you’d agreed to participate in this study, so I’m just following up on that. Would now be a good time to talk?

[If yes...] Great, thank you! The interview takes about 15-20 minutes, but please let me know if you need to go at any time. Also, I do not actually work for the National Postal Museum or design any of their programs, so feel free to be honest in your responses. All of your responses will be kept confidential and are only used to help the Postal Museum better serve teachers and students. Also, you may have filled out an online survey about the *Listen, Look and Do* program each month, but this interview will focus on your overall perceptions and experience of the program throughout the year. Do you have any questions before we get started?

[If no...] No problem. Is there a more convenient day or time I could call you back?”

### Part I

First, I’d like to start off with some general questions about your visits to the Postal Museum:

- 1. Can you briefly describe the class you brought to the *Listen, Look & Do* program? (age, class size, demographics, etc.)? What is your role? (i.e. primary teacher, teaching assistant, etc.)**
  
- 2. What motivated you to bring your students to participate in *Listen, Look & Do*? What did you hope/expect your students to get out of the experience?**

3. If you had to describe the *Listen, Look & Do* program to a colleague, what would you say?

## Part II

The next set of questions relate to your perception of your students' experience at the Postal Museum.

4. What do you think your students enjoyed most about participating in the *Listen, Look & Do* program? Why?
5. What do you think was most valuable or beneficial about the visits for your students? (Probe: What do you think students got out of coming to the program?)
6. [If class visited 3 or more times...] What changes, if any, did you notice in your students over the course of the visits to the museum? (Probe: Did you notice any changes in their sense of comfort or familiarity in the museum environment?)

## Part III

The next set of questions relate to your own experience as a teacher bringing students to the Postal Museum.

7. What aspects of *Listen, Look & Do* did you find most valuable/beneficial for you as a teacher? Why?

**8. Please rate the following statements from 1 to 10:**

How likely is it that you would recommend a colleague bring a class to <i>Listen, Look &amp; Do</i> ?	Not at all likely (Definitely not)	1	2	3	4	5	6	7	8	9	10	Very likely (Definitely)
How likely is it that you would bring a class back for <i>Listen, Look &amp; Do</i> another year?	Not at all likely (Definitely not)	1	2	3	4	5	6	7	8	9	10	Very likely (Definitely)
To what degree were your expectations of the program met?	Not at all	1	2	3	4	5	6	7	8	9	10	Completely
How would you rate the Postal Museum overall as a place to bring your students?	Poor	1	2	3	4	5	6	7	8	9	10	Excellent

**9. In what ways were you able to incorporate the *Listen, Look, & Do* program visits into your teaching or work with children? (discussions, activities, assignments, etc.)**

**10. In what ways, if at all, did the *Listen, Look & Do* program support your goals as a teacher or caregiver?**

**11. How could the *Listen, Look & Do* program, or the Postal Museum in general, better serve your needs as a teacher or caregiver? (e.g. logistics, materials, resources, etc.)**

**→Could you provide one suggestion for making the *Listen, Look & Do* program a better experience for you and your students?**

**12. Do you have any other thoughts you'd like to share about your experiences with the *Listen, Look & Do* program?**

**Part III.**

Finally, I just have a few demographic questions.

How many years have you been teaching and/or working with children?

less than 5  5-9  10-14  15-19  20 or more

Had you brought a class to the *Listen, Look & Do* program before?  YES  NO

Have you ever come to the Postal Museum on your own as a visitor?  YES  NO

*Thank you so much for your time and input. We really appreciate it!*

## **APPENDIX C: CASE STUDY PRE- AND POST-TEST PROTOCOLS**



## National Postal Museum “Listen, Look and Do” Evaluation Pre- and Post-Activities with Students

### Overview

In order to document how the “Listen, Look and Do” program experience may impact pre-K students over time on multiple measures, a pre-activity will be conducted before the first program experience (October 2007) and a post-activity will be conducted after the completion of the program (May 2008). In addition, to identify whether children are taking away the intended content themes and messages, a post-activity will take place after each of the four programs observed.

### Program pre-activity (x 1)

Purpose: To gather baseline data on some of the intended outcomes of the “Listen, Look and Do” program. Specifically, to assess the children’s understanding of what a museum is, their prior experience, and their general attitudes about museums.

NPM staff members will direct students to tables and chairs to sit in before story time. The LLD facilitator (or other NPM staff member) will introduce the researcher and prepare the students for what to expect that day. The staff member will explain that the researcher and the museum are interested in what they already know about museums and what they think about them. The staff member can say something like:

“This is (researcher name). She is interested in learning more about what we do here at the museum, so she will be joining us several times throughout the year to watch and take notes about the *Listen, Look and Do* program. She may also want to talk with you or do an activity to learn more about what you think about the program and the museum; and she will also visit you in your classroom a few times throughout the year. Today, before we begin the program, she has a special drawing activity she would like you to do. Then she will just be walking around with us and taking some notes on what we’re doing. Is that okay with everyone?”

#### 1) *Drawing*

Materials needed: drawing paper, crayons and/or markers

The researcher will explain that the children should draw a picture of whatever they think of or feel when they hear the word “museum,” or think about going to a museum. She will also explain that someone will come around and write their name on the picture and a sentence about what it means. The researcher will say something like:

“Hi everyone. Thanks for letting me join you today. Before we start the program, I would just like each of you to take a few minutes to draw a picture of what you think about or feel when you hear the word museum. There are no right or wrong answers or ideas – just draw what comes to your mind. Then one of us will come around and have you tell us in words what your picture means. If you don’t think of anything when you hear the word museum, that’s okay too. Just draw a picture of whatever you think about. The museum will keep the pictures so we can look at them more closely, but we can give copies to your teacher later on, so you can take them home or keep them in the classroom if you want. When you are finished with your picture, please raise your hand and one of us will come to you.”

As each child finishes, one of the staff members, researchers, or teacher/chaperones, will write the student’s first name and last initial on the paper and ask them to describe the picture in one sentence, which should be written on the back of the picture. The ILI researcher will collect all of the pictures when everyone is finished.

## **2) *Small group discussion***

Materials needed: notepads, digital recorders (all provided by ILI)

The researcher will break the students into groups of 3-4. An NPM staff member or ILI researcher will spend 5-10 minutes facilitating a group discussion focused on what the children think of when they hear the word “museum” – what words, images, etc. – and their past experience and associations with museums. (This activity will be repeated at the end of the program to see if their understanding of a museum is more detailed and/or more accurate; and also if they indicate any different feelings or associations about being in a museum.)

Each facilitator will ask their group the following questions, and record their answers on a digital recorder, as well as on a notepad. The facilitator will remind the children that she/he is just interested in their thoughts and ideas and that there are no right or wrong answers. The facilitator will also let the children know that they will record the conversation and that they should speak loudly and clearly, so we can hear everything they have to say.

1. What do you think of when you hear the word “museum”?
2. Have you ever been to a museum before? If so, which one(s)? (*If they can’t remember the name, ask what they saw there.*)
3. What did you see or do at the museum?
4. How did you feel being in the museum?
5. Can you think of any ways you’re supposed to behave (or “rules”) at a museum? Do you think it’s easy or hard to follow them?

### **Individual lesson post-activity (x 4)**

Purpose: To identify the extent to which the objectives of the specific lesson were achieved; to better understand what children walk away with after each of the four lessons observed by the researcher.

The researcher will conduct a post-activity back in the classroom within 1-2 days following the museum program experience. The post-activity will focus on the specific content/themes and objectives from that month's program. A combination of drawing, story-telling, and brief individual interviews will be used. First, the classroom teacher will re-introduce the researcher to the class and explain why she is visiting. The teacher can say something like:

“Do you all remember (researcher name)? We met her at the Postal Museum the other day, and now she's here in our classroom to do a couple of more activities with you. Again, she's interested in learning more about what we do at the museum and what you remember about it. So she will be asking you to draw pictures and will be talking to each of you throughout the morning. Is that okay with everyone?”

#### **1) *Drawing***

The researcher will instruct children to draw a picture of their most recent experience at the Postal Museum in order to capture what they remember most and how they felt about the experience. The researcher will tell the children:

“I'm interested in finding out what you remember about your visit to the Postal Museum and how you felt there. So when you think about the Postal Museum you went to the other day, what do you think about, or what do you see in your mind? Then draw those things as best you can. There are no right or wrong answers, or right or wrong pictures to draw. Also, I really want to know what you remember, not your neighbor. So try to think of your own ideas rather than copying someone else's.

We will just take a few minutes to do that and then I will ask everyone to put the markers away, and I will collect the drawings so I can share them with the people at the museum. I will make copies of your pictures so you can have them back if you'd like. Then I will talk to each of you individually and ask you about your picture and some other questions about the visit to the Postal Museum.”

After everyone has finished their drawing, the researcher will collect them and keep the drawings for analysis. Each child will be given an I.D. number, so that researchers can correlate the drawings and interviews across all four data collection points. The researcher will then randomly interview one child at a time (see Part 2 below).

#### **2) *Interview***

In order to measure what children experienced and learned about during the visit, the researcher will conduct brief 5-minute, recorded interviews with each child a day or two after the experience. These interviews will be recorded for accurate documenting of the child's exact words, but the children will not be identified by name. The interview will first focus on the child's description of their picture. The researcher will ask:

1. What did you draw in your picture? What is your picture about? (Prompts: Can you tell me more about that? Why did you draw that particular thing?)

The remaining questions will focus on the child's overall experience at the museum, as well as specific content from that month's lesson. For example, questions for the October lesson would include:

2. What did you do at the Postal Museum this month? (Or what do you remember most about the Postal Museum?)
3. What did you like the most about your visit? Why?
4. Do you remember who Roberto Clemente was? What do you remember about him?
5. What were some of the feelings that Roberto Clemente had in the story? Why?
6. What made Roberto Clemente unique or special?
7. What makes you unique or special?

### **Program post-activity (x1)**

Purpose: To measure the degree of change over time in children's understanding of what a museum is, and their attitudes, perception, and general comfort/familiarity within the museum environment.

At the completion of the yearlong program (May 2008), the researcher will conduct a post-activity in the classroom that focuses on the students' associations, attitudes, and awareness of what a museum is – addressing both cognitive and affective aspects. A combination of group discussion, drawings, and storytelling will be used as follows:

#### ***1) Group discussion***

Similar to the program pre-activity, the researcher will ask students as a group to name all the words, ideas, and images that come to mind when they think about the word "museum." The researcher will ask the children the following questions, and record their responses on a flip chart. The researcher will remind children that she is just interested in their thoughts and ideas and that there are no right or wrong answers.

1. What do you think of when you hear the word "museum"?
2. What kinds of things do you see or do at a museum?
3. How does being in a museum make you feel?

4. Do you know of any rules at a museum? Do you think it's easy or hard to follow them?

**2) Drawings**

In order to triangulate the data, the researcher will ask students to then draw a picture of what they think of or feel when they think about going to a museum. She will let them know that they can take as much time as they want and draw anything that comes to mind related to the word "museum." Again, there are no right or wrong ways to do the drawing. The pictures will be kept by the researcher and identified with the students ID#.

**3) Storytelling/interview**

The researcher will then talk with each student individually and have them explain their picture. What is in the picture? What does it mean to them? Why did they choose certain images? These "interviews" will be recorded, identified with the student's ID number, and later analyzed in relation to the picture.

**APPENDIX D: CASE STUDY - FOCUSED OBSERVATION PROTOCOLS FOR  
RESEARCHER AND TEACHER**



## National Postal Museum “Listen, Look and Do” Evaluation Focused Observation Protocols & Instrument

### Overview

The purpose of this portion of the program evaluation is to document observed behaviors of pre-K students participating in the “Listen, Look and Do” case study over multiple visits. An ILI researcher will conduct the observations throughout the 2007-2008 year. The instrument focuses on four main areas: 1) cognitive skills, including observing, comparing, interpreting, and associating (e.g., making connections to prior knowledge or experience); 2) verbal language skills (e.g., frequency and quantity of descriptors used); 3) affective responses, such as demonstrating a sense of comfort and familiarity, and making personal connections to the content of the program; and 4) knowledge/awareness of program themes and understanding of what a “museum” is.

### Case Study

The case study class was selected because they represent the “typical” pre-K group that the Postal Museum is trying to reach through this program on several demographic measures. The school is within close geographic proximity to the museum, it is a public school, and the students tend to come from low SES and minority backgrounds. The group also plans to “Listen, Look and Do” every month, providing maximum exposure to the program. The teacher, Laura Elgort, has agreed to participate; parents were notified of their children’s participation in the study through a letter sent home with the students. The class will be observed during the museum program four times throughout the year by both an ILI researcher and the classroom teacher. In addition, the researcher will visit the classroom at least once to make comparative observations between the museum and classroom contexts. Tentatively, the months for onsite data collection are as follows:

1. October 2007 (Roberto Clemente)
2. December 2007 (Mailing May)
3. February 2008 (Duke Ellington)
4. April 2008 (A Lucky Dog)<sup>8</sup>

### Introduction

During the first observation in October, an ILI researcher will facilitate a pre-activity and will be introduced to the case study class as someone who will be joining them for some of their classes at the Museum, taking notes, talking with them about their experiences, and visiting their regular classroom periodically (See Pre and Post Activities Protocol). On subsequent program visits, the NPM facilitator will briefly re-introduce the researcher to the students to remind them of why she is there and minimize any discomfort or distraction they might feel because of the researcher’s presence during the program. The NPM facilitator will say something like:

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<sup>8</sup> Due to teacher rescheduling the April visit, the researcher was not able to attend this lesson, and instead observed the May lesson, “Dear Juno”.

“Remember (researcher name)? She came and visited us before at the museum and in your classroom. She’s here again today to learn more about what we do here at the museum. So just like before, she’s going to join us through all of the activities, but will only be observing and taking notes, rather than participating. But feel free to ask her any questions if you’d like. Is that okay with everyone?”

The researcher will take detailed notes throughout the entire one-hour program using the Focused Observation Instrument (see Appendix 1). The classroom teacher will use the Teacher Focused Observation Form (see Appendix 2) in order to supplement the researcher’s observations and provide context for the children’s behavior in comparison to the classroom context.

**APPENDIX D.1:  
FOCUSED OBSERVATION INSTRUMENT**

# “Listen, Look and Do” Program Evaluation

Researcher Name: Jill Stein

Date: February 2008

Program: Duke Ellington (African American Heritage month)

Teacher: Laura Elgort

Number of children present: \_\_\_\_\_

Start/stop time: \_\_\_\_\_ / \_\_\_\_\_

## Part I – Story Time

Start/stop time: \_\_\_\_\_ / \_\_\_\_\_

1. Describe what children do and say during story time, including:

- Level of engagement (e.g. eye contact, body language, attention/focus, physical and verbal participation);
- Comfort level (e.g. recognizing staff members, galleries or other spaces, objects; referencing things they have seen or done before in the museum, referencing similar experiences outside the museum); and
- Relevant social interactions (e.g., among children, between children and facilitator, children and teacher). Do children ask questions and offer input, or do they only respond when prompted? To what extent do they verbally participate during story time and discussion?

2. Use the following rating scale for specific points and activities: 1 = minimal 2 = somewhat 3 = moderate 4 = extensive

3. Notes:

Intro activities and questions

Engagement:

Participation:

Ability:

Reading of story (Note specific elements during story time where possible)

Engagement:

Participation:

Ability:

Kinesthetic activities (e.g. pretending to play piano, tapping to the beat)

Engagement:

Participation:

4. Rate students during story time on the following measures:

Level of engagement

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Notes:

Level of participation

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Notes:

Attentiveness, focus

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Notes:

Comfort level

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Notes:

Social interaction

Child to child

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Child to facilitator

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Child to teacher

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Notes:

5. Document cognitive skills demonstrated during story time, as outlined below:

- ✓ **Observing** what something is or is not (object, person, animal); naming or identifying something; **Observing** concretely and explicitly how something looks, where it is located, how many there are; pointing out a feature or physical characteristic of an object, person, or animal, including colors, shapes, and textures.

Frequency:

Elicited by adult/facilitator	Generated by child independently

Examples:

- ✓ **Interpreting** implicit conditions or features of objects, animals, or people, such as feelings, emotions, mental states; how objects are used; **Interpreting** identity (who people are, relationships).

Frequency:

Elicited by adult/facilitator	Generated by child independently

Examples:

- ✓ **Comparing** what is similar or different; noticing relationships between situations/objects; noticing patterns

Frequency:

Elicited by adult/facilitator	Generated by child independently

Examples:

- ✓ **Associating** the object/situation directly with prior experience or knowledge; making connections to personal experience

Frequency:

Elicited by adult/facilitator	Generated by child independently

Examples:

## Part II. Gallery Visit

Start/stop time: \_\_\_\_\_ / \_\_\_\_\_

1. Describe what children do and say during the gallery visit, including:

- Level of engagement (e.g. eye contact, body language, attention/focus, physical and verbal participation, manipulation of objects where appropriate);
- Comfort level (e.g. recognizing staff members, galleries or other spaces, objects; referencing things they have seen or done before in the museum, referencing similar experiences outside the museum, exploring things on their own); and
- Relevant social interactions (e.g., among children, between children and facilitator, children and teacher). Do children ask questions and offer input, or do they only respond when prompted? To what extent do they verbally participate during story time and discussion?

2. Use the following rating scale for specific points and activities: 1 = minimal 2 = somewhat 3 = moderate 4 = extensive

3. Notes:

Train Car

Engagement:

Participation:

Ability:

Stamp Gallery

Engagement:

Participation:

Ability:

Trailblazers and Trendsetters

Engagement:

Participation:

Ability:

4. Rate students during the gallery visit on the following measures:

Level of engagement

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Notes:

Level of participation

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Notes:

Attentiveness, focus

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Notes:

Comfort level

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Notes:

Social interaction

Child to child

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Child to facilitator

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Child to teacher

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Notes:

5. Document cognitive skills demonstrated during the gallery visit, as outlined below:

- ✓ **Observing** what something is or is not (object, person, animal); naming or identifying something; **Observing** concretely and explicitly how something looks, where it is located, how many there are; pointing out a feature or physical characteristic of an object, person, or animal, including colors, shapes, and textures.

Frequency:

Elicited by adult/facilitator	Generated by child independently

Examples:

- ✓ **Interpreting** implicit conditions or features of objects, animals, or people, such as feelings, emotions, mental states; use of objects; **Interpreting** identity (who people are, relationships).

Frequency:

Elicited by adult/facilitator	Generated by child independently

Examples:

- ✓ **Comparing** what is similar or different; noticing relationships between situations/objects; noticing patterns

Frequency:

Elicited by adult/facilitator	Generated by child independently

Examples:

- ✓ **Associating** the object/situation directly with prior experience or knowledge; making connections to personal experience

Frequency:

Elicited by adult/facilitator	Generated by child independently

Examples:

### Part III. Art Activity

Start/stop time: \_\_\_\_\_ / \_\_\_\_\_

1. Describe what children do and say during the art activity, including:
  - Level of engagement (e.g. eye contact, body language, attention/focus, physical and verbal participation);
  - Comfort level (e.g. recognizing staff members, galleries or other spaces, objects; referencing things they have seen or done before in the museum, referencing similar experiences outside the museum); and
  - Relevant social interactions (e.g., among children, between children and facilitator, children and teacher). Do children ask questions and offer input, or do they only respond when prompted? To what extent do they verbally participate during story time and discussion?
  - Time spent on art activity, understanding task, use of key vocabulary, referencing other aspects of lesson
2. Use the following rating scale for specific points and activities: 1 = minimal 2 = somewhat 3 = moderate 4 = extensive
3. Notes:

Free exploration of instruments

Playing of instruments (patterns)

Discussion questions

4. Rate students during the art activity on the following measures:

Level of engagement

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Notes:

Level of participation

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Notes:

Attentiveness, focus

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Notes:

Comfort level

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Notes:

Social interaction

Child to child

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Child to facilitator

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Child to teacher

1 = minimal 2 = somewhat 3 = moderate 4 = extensive

Notes:

6. Document cognitive skills demonstrated during the art activity, as outlined below:

- ✓ **Observing** what something is or is not (object, person, animal); naming or identifying something; **Observing** concretely and explicitly how something looks, where it is located, how many there are; pointing out a feature or physical characteristic of an object, person, or animal, including colors, shapes, and textures.

Frequency:

Elicited by adult/facilitator	Generated by child independently

Examples:

- ✓ **Interpreting** implicit conditions or features of objects, animals, or people, such as feelings, emotions, mental states; use of objects; **Interpreting** identity (who people are, relationships).

Frequency:

Elicited by adult/facilitator	Generated by child independently

Examples:

- ✓ **Comparing** what is similar or different; noticing relationships between situations/objects; noticing patterns

Frequency:

Elicited by adult/facilitator	Generated by child independently

Examples:

- ✓ **Associating** the object/situation directly with prior experience or knowledge; making connections to personal experience

Frequency:

Elicited by adult/facilitator	Generated by child independently

Examples:

**APPENDIX D.2:  
TEACHER FOCUSED OBSERVATION FORM**

# Teacher Focused Observation Form

## “Listen, Look and Do” Program Evaluation

**Teacher Name:** Laura Elgort

**Date:** February 2008

**Program:** Duke Ellington (African American Heritage Month)

**Names of any students not present today:**

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**Instructions:** This form is divided into three parts to reflect the structure of the LLD program: 1) Story time; 2) Gallery Visit; and 3) Art Activity. You will be asked to make similar observations and ratings for each of three components of the program, so please take notes on each component separately. As you do so, keep in mind how your students behave (attention, participation, engagement, etc.) during similar activities at school, such as story or craft time.

In addition to the specific questions and ratings on the form, there is room for you to make special notes about any differences in behavior, attention, participation, engagement, attitude, and cognitive/verbal/kinesthetic skills that you notice between the Postal Museum and the classroom contexts. Give examples based on specific children wherever possible. If you don't notice any differences, that's okay too – just note that on the form.

## Part I – Story Time

Please rate your class on a scale of 1-10 (with 1 being “**much less**” and 10 being “**much more**”) on the following measures, **in comparison to a similar activity in the classroom:**

**1. Engagement/interest** (please circle one)

Much less  
engaged

Much more  
engaged

1      2      3      4      5      6      7      8      9      10

**2. Attention/focus** (please circle one)

Much less  
attentive

Much more  
attentive

1      2      3      4      5      6      7      8      9      10

**3. Participation – verbal and physical/kinesthetic** (please circle one)

Much less  
participation

Much more  
participation

1      2      3      4      5      6      7      8      9      10

**4. Comfort/familiarity** (please circle one)

Much less  
comfortable

Much more  
comfortable

1      2      3      4      5      6      7      8      9      10

**5. Appropriate/relevant social interactions** (please circle one)

Much less  
social

Much more  
social

1      2      3      4      5      6      7      8      9      10

**Notes:** Please describe, in as much detail as possible, what you notice about your students' behavior, engagement, participation, etc. during story time. For example, how attentive and interested do they seem? At what points do they lose interest? At what points are they most/least engaged? To what extent do they verbally and physically participate? Try to compare their behavior to the classroom context and give examples from specific students whenever possible.

## Part II – Gallery Visit

Please rate your class on a scale of 1-10 (with 1 being “much less” and 10 being “much more”) on the following measures, in comparison to their general classroom behavior (engagement, interest, attention, participation, etc.):

### 1. Engagement/interest (please circle one)

Much less  
engaged

Much more  
engaged

1      2      3      4      5      6      7      8      9      10

### 2. Attention/focus (please circle one)

Much less  
attentive

Much more  
attentive

1      2      3      4      5      6      7      8      9      10

### 3. Participation – verbal and physical/kinesthetic (please circle one)

Much less  
participation

Much more  
participation

1      2      3      4      5      6      7      8      9      10

### 4. Comfort/familiarity (please circle one)

Much less  
comfortable

Much more  
comfortable

1      2      3      4      5      6      7      8      9      10

### 5. Appropriate/relevant social interactions (please circle one)

Much less  
social

Much more  
social

1      2      3      4      5      6      7      8      9      10

**Notes:** Please describe, in as much detail as possible, what you notice about your students' behavior, engagement, participation, etc. during the gallery visit. For example, how attentive and interested do they seem? At what points do they lose interest? At what points are they most/least engaged? To what extent do they verbally and physically participate? Try to compare their behavior to the classroom context and give examples from specific students whenever possible.

### Part III – Art Activity

Please rate your class on a scale of 1-10 (with 1 being “much less” and 10 being “much more”) on the following measures, in comparison to a similar activity in the classroom:

**1. Engagement/interest** (please circle one)

Much less  
engaged

Much more  
engaged

1      2      3      4      5      6      7      8      9      10

**2. Attention/focus** (please circle one)

Much less  
attentive

Much more  
attentive

1      2      3      4      5      6      7      8      9      10

**3. Participation – verbal and physical/kinesthetic** (please circle one)

Much less  
participation

Much more  
participation

1      2      3      4      5      6      7      8      9      10

**4. Comfort/familiarity** (please circle one)

Much less  
comfortable

Much more  
comfortable

1      2      3      4      5      6      7      8      9      10

**5. Appropriate/relevant social interactions** (please circle one)

Much less  
social

Much more  
social

1      2      3      4      5      6      7      8      9      10

**Notes:** Please describe, in as much detail as possible, what you notice about your students' behavior, engagement, participation, etc. during the art activity. For example, how attentive and interested do they seem? How engaged are they in the activity? To what extent do they participate? Try to compare their behavior to the classroom context and give examples from specific students whenever possible.

**APPENDIX E: CASE STUDY – PROTOCOL FOR STUDENT FOLLOW-UP  
DRAWINGS AND INTERVIEW**

**National Postal Museum**  
**Listen, Look & Do Program Evaluation**  
**Individual lesson post-activity - December (Mailing May)**

Purpose: To identify the extent to which the objectives of the specific lesson were achieved; to better understand what children walk away with after each of the four lessons observed by the researcher.

The researcher will conduct a post-activity back in the classroom within 1-2 days following the museum program experience. The post-activity will focus on the specific content/themes and objectives from that month's program. A combination of drawing, story-telling, and brief individual interviews will be used. First, the classroom teacher will re-introduce the researcher to the class and explain why she is visiting. The teacher can say something like:

“Do you all remember (researcher name)? We met her at the Postal Museum the other day, and now she's here in our classroom to do a couple of more activities with you. Again, she's interested in learning more about what we do at the museum and what you remember about it. So she will be asking you to draw pictures and will be talking to each of you throughout the morning. Is that okay with everyone?”

**2) *Drawing***

The researcher will instruct children to draw a picture of their most recent experience at the Postal Museum in order to capture what they remember most and how they felt about the experience. The researcher will tell the children:

“I'm interested in finding out what you remember about your visit to the Postal Museum and how you felt there. So when you think about the Postal Museum you went to the other day, what do you think about, or what do you see in your mind? Then draw those things as best you can. There are no right or wrong answers, or right or wrong pictures to draw. Also, I really want to know what you remember, not your neighbor. So try to think of your own ideas rather than copying someone else's.

We will just take a few minutes to do that and then I will ask everyone to put the markers away, and I will collect the drawings so I can share them with the people at the museum. I will make copies of your pictures so you can have them back if you'd like. Then I will talk to each of you individually and ask you about your picture and some other questions about the visit to the Postal Museum.”

After everyone has finished their drawing, the researcher will collect them and keep the drawings for analysis. Each child will be given an I.D. number, so that researchers can correlate the drawings and interviews across all four data collection points. The researcher will then randomly interview one child at a time (see Part 2 below).

## 2) *Interview*

In order to measure what children experienced and learned about during the visit, the researcher will conduct brief 5-minute, recorded interviews with each child a day or two after the experience. These interviews will be recorded for accurate documenting of the child's exact words, but the children will not be identified by name. The interview will first focus on the child's description of their picture. The researcher will ask:

1. What did you draw in your picture? What is your picture about? (Prompts: Can you tell me more about that? Why did you draw that particular thing?)

The remaining questions will focus on the child's overall experience at the museum, as well as specific content from that month's lesson. For example, questions for the December 2007 lesson are:

What did you do or see at the Postal Museum this month? (Or what do you remember most about the Postal Museum?)

2. What did you like the most about your visit? Why?
3. Do you remember who May was? What do you remember about her?
4. Do you remember how May felt during the story? Why did she feel that way?
5. Do you remember the train car? What was it used for?

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