The Eavesdropping Evaluator

Evaluating Live Conversations on the Floor
Stephanie Downey, Director, RK&A (evaluator)
Moderator

Kate Fermoile, Director of Exhibitions and Interpretation, Brooklyn Botanic Garden.
Acting on evaluation results

Sal Bell Alper, Manager of School Field Trips Programs, Exploratorium
Empowering explainers to evaluate their own practice

Carey Meier, Interpretation Program Development Manager, Children’s Museum of Indianapolis.
Integrating planning and evaluation

Format: Presentations, followed by Roundtables, ending with Q&A
The Eavesdropping Evaluator
Evaluating Live Conversations on the Floor
Considerations for evaluation of floor staff and volunteers
#1: Treat interpretive floor staff as the *adult learners* they are when training and evaluating them.

Research on the way adults learn show that “adults let their interests guide their learning, they are self-directed, meaning they prefer planning and directing their own learning.”
#2: Move from a top-down model of training and evaluating floor staff to a bottom-up model that allows the floor staff to share authority in their own learning and practice.

Make time and space for people to work together and learn from one another.

Hold floor staff and volunteers accountable to their goals.

Create opportunities for peer learning.
When it comes to the kinds of experiences your visitors have with floor staff and volunteers, **consistency** matters.

Standardize your training and evaluation to create a shared language across staff and volunteers.
The Discovery Garden is a place where kids of all ages explore habitats, uncover plant mysteries, and learn about garden wildlife through fun hands-on science exhibits and programs.
Discovery Docents

Volunteer docents facilitate drop in science and nature programs at Discovery Carts to 30,000 children, their families and teachers.

Topics include:

- Basic Botany
- Pollination
- Plant form and function
- Plant Evolution
- Seed Dispersion
- Soil and Compost
Evaluation Goals

RKA’s Findings
Science Lessons for Docents
Addition of Science Experiments in the Garden

Check out this science experiment. We planted seeds from our kitchen cabinets here to see if they would grow. What seeds do you like to eat?

Do plants breathe? Yes! Plants breathe in carbon dioxide and release oxygen (the opposite of humans). When plants breathe, they create water vapor or water in gas form. Look closely, can you find any evidence that these plants are breathing?
explOratorium

Sal Alper
At a Glance

“Our vision is a world where people think for themselves and can confidently ask questions, question answers, and understand the world around them.”

- >600 exhibits
- <1 million visitors
- 400+ staff
- $50 million budget
- Almost 50 years old!
Field Trips

FT Audience-120,000

FT Experience
● Self guided/Free choice learning
● Orientation and Demos

Educators
● 23 FT Explainers
● Professional Development

High School Explainers
Visitor Research and Evaluation at Exploratorium

Support Educators in their own evaluation and self reflection.
the best way to learn is to teach, the best way to teach is to keep learning, and what counts in the end is having had a shared, reflected experience

--Frank Oppenheimer
BUILDING and SUPPORTING DIVERSE TEAM

FEEDBACK and PROGRESS

REFLECTION on TEACHING and LEARNING

EDUCATOR

DESIGN for ENGAGEMENT and INQUIRY
Mission:

To create extraordinary learning experiences across the arts, sciences and humanities that have the power to transform the lives of children and families.
The Big Idea:

The work of NASA scientists plays a vital role in making human space exploration and research possible.
<table>
<thead>
<tr>
<th>Exhibit / Space</th>
<th>Beyond Space: Mission Earth: The ISS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Title</td>
<td>Astronauts in Training: Earth on the ISS</td>
</tr>
</tbody>
</table>

**Program Description**

Children and families will encounter Astronauts in Training sharing details about the life and work in space and are invited to participate in one of these topics of interest:

- **Big Idea**: The work of space activities plays a vital role in making human space exploration and research possible.

**Target Audience**

Children ages 8 and up and their families

**Goals**

- Children and families will take a closer look at life aboard space station.

**Objectives**

- Families will hear introductory information about the International Space Station.
- Families will see and touch objects as they are in space (such as food, hygiene kit, space suit, etc.) and learn how they are used.
- Families will explore how life is different in space than on Earth.

**Family Learning Behaviors**

- **Target Attendance for Astronaut’s Training**: 20 people per 30 minutes.
- Successfully selects family learning by accomplishing the intended family learning behaviors defined in the lesson plan.
- **Family Members**: Child compares something to themselves, other family members or other objects.
- **Family Members**: Child compares something to themselves, other family members or other objects.

**Strategies**

- Facilitator will welcome families to the international space station.
- Facilitator will share a brief explanation of what the space station is.
- Facilitator will invite families to climb the station.
- Facilitator will use props and materials to make observations and connections.
- Facilitator will encourage families to learn how they do things on Earth (based on the tail of these activities, in planning to have a real panel of people coming).
- Facilitator will encourage families to explore how things are different in microgravity.
- Facilitator will use props and materials to explore how things are similar and/or different in space.
- Facilitator will encourage families to explore where and how things are different in space.

**Metric**

- **Facilitator**
  - Will welcome families to the international space station.
  - Will share a brief explanation of what the space station is.

**Implementation Dates**: June 25, 2016

**Program/Activity Title**: Astronauts in Training: Earth on the ISS

**Target Audience**: Children ages 8 and up and their families

**Exhibit/Space**: Beyond Space: Mission Earth: The ISS

**Created By**: Casey Hune

**Staff Needed**: 1

**Big Idea**: The work of NASA scientists plays a vital role in making human space exploration and research possible.

**Goals**

- Children and families will be invited to take a closer look at life aboard the space station.

**Objectives**

- **Families** will hear an introduction to what the International Space Station is.
- Families will see and touch objects as they relate to life on the Space Station (such as food, hygiene kit).
- Families will explore how life is different in space than on Earth.

**Family Learning Behaviors**

- **Families** will hear an introduction to what the International Space Station is.
- Families will see and touch objects as they relate to life on the Space Station (such as food, hygiene kit).
- Families will explore how life is different in space than on Earth.

**Ideas for Initiating Interactions**

- **Facilitator**
  - Will welcome families to the international space station.
  - Will share a brief explanation of what the space station is.
  - Will invite families to climb the station.
  - Will use props and materials to make observations and connections.
  - Will encourage families to learn how they do things on Earth (based on the tail of these activities, in planning to have a real panel of people coming).
  - Will encourage families to explore how things are different in microgravity.
  - Will use props and materials to explore how things are similar and/or different in space.
  - Will encourage families to explore where and how things are different in space.
  - Will welcome families to explore another part of the Space Station to continue training.
  - Will extend interactions to provide space-based on time and space availability.
  - Will invite families to participate in a problem-solving activity together.
  - Will encourage families to work together and share what they learned.

The Children’s Museum of Indianapolis
<table>
<thead>
<tr>
<th>Date</th>
<th>Day of Week</th>
<th>Notes</th>
</tr>
</thead>
</table>

### Describe Facilitator Strategies During Program:

<table>
<thead>
<tr>
<th>Approachability</th>
<th>Costume appropriate, program supplies and signage correct, smiling/welcoming, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiation</td>
<td>Strong use of voice, active and not passive, use of appropriate energy and character for program</td>
</tr>
<tr>
<td>Questioning Methods</td>
<td>Strong use of objects, Bloom's taxonomy questioning approach throughout program</td>
</tr>
<tr>
<td>Adult Engagement</td>
<td>Direct address, indirect through child, task, family discussion, etc.</td>
</tr>
<tr>
<td>Extended and Deepened Learning</td>
<td>Guest-driven approach, finding connections to other exhibits and experiences outside the museum</td>
</tr>
<tr>
<td>Adoption (only if applicable)</td>
<td>Present and flexible for younger guests, larger groups, etc.</td>
</tr>
<tr>
<td>Adult participation level (circle)</td>
<td>To what extent is the adult participating in the program?</td>
</tr>
<tr>
<td>Notes</td>
<td></td>
</tr>
<tr>
<td>Task</td>
<td>Observations</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Total Observations</td>
<td>42</td>
</tr>
<tr>
<td>Average Length</td>
<td>3.6</td>
</tr>
<tr>
<td>Interactions under 3 minutes</td>
<td>38%</td>
</tr>
<tr>
<td>Interactions over 3 minutes</td>
<td>19%</td>
</tr>
<tr>
<td>How often did the program start late?</td>
<td>23%</td>
</tr>
<tr>
<td>Actor welcomes/greets families to the ISS</td>
<td>69%</td>
</tr>
<tr>
<td>Facilitator will introduce themselves</td>
<td>53%</td>
</tr>
<tr>
<td>Actor has at least one object with them as a conversation starter</td>
<td>90%</td>
</tr>
<tr>
<td>Must have object(s):</td>
<td>23%</td>
</tr>
<tr>
<td>Actor uses objects or ISS components as part of their interaction with visitors</td>
<td>95%</td>
</tr>
<tr>
<td>P. Family member contributes information or asks a question during program</td>
<td>79%</td>
</tr>
<tr>
<td>W. Family member shares basic info/facts</td>
<td>65%</td>
</tr>
<tr>
<td>FF. Family members compare something to themselves, other family members, or other objects</td>
<td>69%</td>
</tr>
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<td>69%</td>
</tr>
<tr>
<td>Stuff invited adult(s) to participate</td>
<td>51%</td>
</tr>
<tr>
<td>Adult actively participates with child</td>
<td>51%</td>
</tr>
<tr>
<td>Adult stands back and is talking</td>
<td>26%</td>
</tr>
<tr>
<td>AdultEncourages adult participation</td>
<td>63%</td>
</tr>
<tr>
<td>throughout interaction</td>
<td>43%</td>
</tr>
<tr>
<td>Gravity/orientation on the ISS</td>
<td>53%</td>
</tr>
<tr>
<td>STEM careers (in space or on the ISS)</td>
<td>3%</td>
</tr>
<tr>
<td>Exercising in space</td>
<td>31%</td>
</tr>
<tr>
<td>Sleeping in space</td>
<td>21%</td>
</tr>
<tr>
<td>Eating in space</td>
<td>19%</td>
</tr>
<tr>
<td>Total Observations</td>
<td>34.4</td>
</tr>
<tr>
<td>Average Length</td>
<td>7.6</td>
</tr>
<tr>
<td>Becoming a cosmonaut/backstory</td>
<td>10%</td>
</tr>
<tr>
<td>Working with other countries on the ISS</td>
<td>7%</td>
</tr>
<tr>
<td>Daily routines</td>
<td>11%</td>
</tr>
<tr>
<td>Actor creates dialog around WMY topic is important or different</td>
<td>71%</td>
</tr>
</tbody>
</table>

**Program Objectives**

- **Target Goal**
  - Actor introduces self as a Russian cosmonaut
  - Actor has object with them as a conversation starter
  - Actor uses objects/ISS components in interaction

**Family Learning**

- **FF. Family members compare something to themselves, other family members, or other objects**
  - Target Goal: 85%
  - Average: 75%
- **W. Family member shares basic info/facts**
  - Target Goal: 85%
  - Average: 66%
- **P. Family member contributes information or asks a question during program**
  - Target Goal: 85%
  - Average: 96%
ROUND TABLE DISCUSSIONS

Kate, Brooklyn Botanic Garden
How do you act upon the information gathered through a formal evaluation with docents/volunteers?

Sal, Exploratorium
How do you support Explainers/staff educators in being self reflective in evaluating their interactions with visitors?

Carey, Children’s Museum of Indianapolis
How can you plan for evaluation from the beginning of the program development process? What tools can you use?