DISCOVER PACIFIC SCIENCE CENTER

Introduction to Interpretation

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INTRODUCTION

Program Description

A one hour workshop focused on the basic elements of Science Interpretation.

This outline is designed for 5-10 participants. It will need to be changed for larger groups.

Objectives of Program

Participants of this workshop will:

- Learn the basics of Science Interpretation and why interpretive interactions are key to fulfilling PSC's mission
- Understand the steps involved in a successful interpretive interaction, including hooking the guest, asking questions to guide learning, letting the visitor lead the conversation, and concluding the interaction
- Discuss the importance of asking questions when engaging with a guest and learn the elements of their "explainer toolkit"
- Understand what SIP is and how we deliver our mission, as well as learn about their learning plan and their involvement with SIP during their learning

Key Points for Workshop Leader

- This program requires physical energy. It should be conducted by someone who can hold the attention and interest of the group.

Set Up

Reserve a room where all can move and make noise without problems.
Have a whiteboard with markers available.
Materials Needed

- Sign-in Sheet
- Workshop Handouts
- Pens/Pencils
- Energy Balls
- Evaluation Sheets

The Workshop

Introduction (2 minutes)

Introduce yourself and thank participants for coming. Pass around the sign-in sheet as well as the workshop handouts. Ask each participant to introduce themselves.

Explain that this training will introduce participants to the concept of Science Interpretation. Ask a participant to read the definition aloud.

Interpretation is a conversation, guided interaction, or any communication that enriches the visitor experience by inspiring new interests and/or helping the visitor make meaningful connections between the programs and exhibits of our institution and their world.

Key Concepts (2 minutes)

- Interpretive interactions between staff or volunteers and Pacific Science Center guests have the ability to positively impact visitor learning and overall experience. Supporting these interactions is essential to fulfilling Pacific Science Center's mission.
- Staff and volunteers must use good customer service and interpretive techniques to engage visitors in interactions. Specific techniques include being approachable and using greetings, hooks or offers to initiate interactions.
- After the initial engagement there is no set path that an interpretive interaction must take. Staff and volunteers can develop the skill and techniques in their "Explainer Toolkit" by participating in further training, observing their peers and practicing interpretation out on the floor.

Convey to participants that interpretation is not about people learning specific facts or science content. It is about getting them to think and discover. A key tip to remember is to let the visitor talk more than you do.

Four Simple Steps to Interpretation (15 minutes)

1. Being Approachable

When working the exhibit floor, being approachable is the first step in encouraging interpretive interactions. There are many ways that you can make yourself appear approachable so that visitors feel comfortable initiating conversation with you. If you adopt the following habits, you will likely feel more comfortable initiating contact with visitors too! Consider the following tips:

- Use good body language – stand up straight, face oncoming visitors, and don't cross your arms.
- Make direct eye contact with visitors.
- Always SMILE!

2. Starting a Conversation – What is a hook?

A hook is a way of grabbing visitors' attention and drawing them in.
A hook has four parts:

1) Eye contact and greeting ("Hi!")
   This gets the visitors' attention.
2) A follow up statement ("How are you?")
   This is an invitation the visitor can accept or reject.
3) A hook statement or question ("Do you want to touch a brain?")
   This lets the visitors know what they're getting into.
4) Follow-up with something that interests you ("Let's try figuring out what animal this brain came from!")
   This begins the conversation.

Activity: Ask participants to brainstorm with a partner. Have them imagine they are inside the butterfly house and want to engage a guest. Ask them to come up with some examples of hooks they might use. After two minutes, ask them to share with the group.

3. Using your Explainer Toolkit
If you do end up in a prolonged interaction with any visitor, there are a million different directions it could head depending on what tricks you pull out of your Explainer Toolkit. This part of the interaction will never repeat itself and will vary greatly in depth and length. Keep in mind that you will adjust your interpretive style according to the interests, background and age of each visitor. As you continue to practice you will add more tricks to your Explainer Toolkit.

Activity: Brainstorm on large post it paper or a dry erase board possible items within the Explainer Toolkit.

Some Toolkit components are:
- Questioning the visitor
- Answering questions
- Playing with an exhibit together
- Drawing connections between the exhibit and the real world or to other exhibits
- Sharing scientific information (not lecturing!)
- Pointing out new or alternative ways to use the exhibit
- Engaging all members of a family/group in the exhibit
- Using analogies, comparisons or changing scale to explain a concept, etc.

4. Ending the Interaction
Always end your conversations politely with a goodbye, thank you, and an offer to answer any last questions. Point them to another exhibit they may find interesting, and say, "I hope you enjoy the rest of your day here at PSC!"

Why Ask Questions? (15 minutes)

Activity: *Energy Ball. An activity that illustrates the power of asking questions to guide learners rather than just telling the information. This connects the participants personally to the content in the workshop.*

1. Take an energy ball and ask, "What do you think this is?" Without showing the metal leads, touch them with two fingers. The ball will start flashing and making noise. Ask the class to explain what is happening. If someone figures out that there is electricity involved, ask, "Where does the energy come from?"
2. Pass out one energy ball to each group of three or four. Ask groups to figure out how the energy ball works. After everyone in each group has explored the energy ball individually, ask the group what they had to do to make it light. Usually they will say the two metal leads need to be touched. Ask if it would work if you touched one lead, and a volunteer touched the other. Demonstrate this, and show that it doesn't work. While touching the leads, touch the other person (and light the ball). Challenge them to use all group members at once to make the energy ball light up (only one person's finger can be on each lead at a time, so only two students may be touching the energy out of the four). When a group figures it out, have them share what they did to solve the challenge.
3. Explain that even though you can't see inside the ball, you can figure it out based on your observations. Ask, "What do you think is in the ball based on what you've seen? …what you've heard?"
4. (Optional, based on group interest and questions) Have the group demonstrate by forming a circle, holding hands (or whatever their method was to make a circuit without the energy ball). Ask two of the participants to let go of their hands and touch one of the metal leads with their fingers.

***Discussion**: Ask how this would have been different if you had just been told how it worked. Would you have understood (and remembered) how it worked had you just been told? What do you think the phrase "inquiry-based learning" means?*

WHY ASK QUESTIONS

- Focus attention
- Arouse interest
- Enhance inclusion by drawing out a reticent learner
- Obtain feedback on progress
- Assess the level of understanding
- Assess the ability to apply learned concepts and knowledge
- Stimulate and guide thinking and reflection
- Encourage observation and prediction
- Explore different viewpoints
- Promote discussion and sharing
- Keep the discussion on track
- Summarize progress and consolidate learning

When questions are asked with a purpose they can be a powerful teaching tool that can lead to learning and discovery.

Asking a lot of questions requires learners to take a lot of risks in giving answers. Strive to create a welcoming atmosphere where all answers are safe by:

- Praising every answer and pointing out what is right about it.
- Allowing learners to explain their reasoning and change their conclusions.

Give learners lots of "wait time" when they respond to your questions. The longer a teacher stays silent after asking a question, the better and more thorough the answers will be.

Yes, and... (10 minutes)

Activity: "Yes, and…"

Explain that now you will do an activity that illustrates the idea of saying "yes, and…" and how this relates to interpretation. Before beginning, ask a participant to tell you what they think "yes, and…" means. Explain that as interpreters, we never want to say "no" to a guest response, even if it is incorrect.

Have participants stand in two lines facing each other. One line will be the "interpreters" and one line will be the "guests". Taking turns, have the person at the front of each line step forward and role-play an interaction. The guest will go first, and state something that they are afraid of in the butterfly house. The interpreter will then respond, with "Yes, and…". The key is to accept the statement from the guest and respond in a way that validates their statement, while adding something to it: an opinion or a personal statement. For example, if the guest says, "I'm afraid a butterfly will bite me," an acceptable answer is, "Yes, I think butterflies have weird looking mouths, too." An unacceptable answer is, "Butterflies don't bite," or even, "Yes, but butterflies won't bite you so you don't need to be afraid." Both of those responses qualify as "No"s. If the interpreter responds with a "No" statement, ask them to try again. Once the interpreter has responded with a "Yes, and…" the partners will run down the middle of the lines (high-fiving everybody as they go) and get back in line, this time in the opposite line they were in before. Run through the interactions until everyone has been the guest once and everyone has been the interpreter once.

Discussion: What was hard about this? Why is saying "yes, and…" important? What does this have to do with what we do as interpreters?

What is SIP? (5 minutes)

Explain to participants that SIP stands for Science Interpretation Program. Ask a participant to read the SIP Mission and Vision aloud.

Science Interpretation Program Mission and Vision
The Science Interpretation Program enhances the Pacific Science Center experience by engaging visitors in personal and inspiring interaction, interpreting science concepts, ensuring smooth daily operations, and providing excellent customer service.

Explain to participants that they will be working closely with SIP since we are the primary people delivering Science Interpretation to guests and we want to ensure consistency in delivery between departments. They will also be working with SIP regarding the logistics of scheduling and shadowing Butterfly Interp and the Butterfly Cart.

Scheduling and Learning (8 minutes)

Explain to participants that the two things they will be learning are first, Butterfly Interp, and second, the Butterfly Cart. Hand out copies of the the Butterfly Interp Checkout Sheet and let them know how learning generally works in SIP. Define what it means to shadow someone. Explain that in SIP our shifts work in 30 minute blocks and that we have a set schedule every day which they will be added to for shadow time.

Horticulture Volunteer Interpretation Learning Plan
1. Attend Intro to Interpretation Workshop
2. Shadow and Study Butterfly Interp until you feel ready to checkout
3. Checkout on Butterfly Interp with Jenn
4. Do Butterfly Interp on the floor (on your own schedule)
5. Shadow and Study Butterfly Cart until you feel ready to checkout
6. Checkout on Butterfly Cart with Jenn, Joy, and/or Lauren
7. Do Butterfly Cart on the floor (coordinating with SIP Schedule)

Your scheduling point person within SIP is Raven Harrell (Interpretive Operations Coordinator).
Raven will schedule an Educator for you to shadow at Butterfly Interp sometime between 10am and 12pm on days that volunteers are in.

Jenn will generally check in with the member of SIP Leadership working on the schedule in the morning to make sure there is someone for you to shadow. At the scheduled time, meet the SIP Educator inside the Butterfly House. If changes need to be made, Raven will contact Life Sciences on the walkie.

Evaluation (5 minutes)

Thank participants for attending the workshop and ask for any final questions. Hand out evaluation forms and ask participants to complete them. Explain that their answers will be confidential and that we appreciate their feedback.