

# Communicating Ocean Sciences to Informal Audiences

## Session 7. Objects in Teaching

# Quick Write

- Objects refer to special things in informal institutions—artifacts, exhibits, specimens, etc.
  - In this course and the Exemplar Activities, how are objects used to teach?
  - What do you talk about with learners while focusing on or using these objects?

# Small Group Discussions

- People visit informal environments for the memories and experiences that they create when they see, touch, smell, and interact with these objects (Gurian, 1999).
- The genius of informal environments exists somewhere in an analysis of how unique and powerful objects support learning in the form of conversations, which get elaborated as small clusters of individuals engage with objects (Leinhardt & Crowley, 2002).

# Features of Objects

- **Resolution**
  - The minute and subtle details of objects, such as bumpy scales of a snake or the stench of the corpse flower when it blooms.
- **Scale**
  - The smallness and largeness of objects, such as steam engines from the Industrial Revolution the size of a room or the femur bone of a dinosaur that stands the height of the room.
- **Authenticity**
  - The realness of objects, such as a Mars rover or a first edition of *On the Origin of Species*.
- **Value**
  - The uniqueness of objects, such as the only live white shark in captivity or a rock from the Moon.

# Research Discussion

- Each group member shares the information from a research card and shares their thoughts
- After each card, invite group members to discuss the topic on the card, including:
  - Anything they find confusing about it.
  - Questions or issues they have about the topic on the card.
  - How teaching might be structured to take this piece of information into account?

# Activity



- Prepare a way to teach how squids catch their food.
- Each group will teach only a 3 to 5-minute clip of the activity, (designate one person as the “educator”).

# Purposes of this Activity

- **Application.**

- Apply your understanding of how people learn and how to support that learning in the design of educational materials and experiences.

- **Affordances.**

- Think deeply about how four different types of objects allow for different ways to engage and interact.

# Instructions for Activity

- What will the group design?
  - Program or activity
- What is the interaction?
  - Feature the object in a classroom-based program, cart activity on gallery floor, at an exhibit, exploration in the discovery lab, show in the auditorium, etc.
- Who is the audience?
  - School group, family, general public, adults, etc.
- Who are the “educator(s)” and “learners”?
  - One or more member(s) of the group is designated as the “educator”; other members of the group are designated as the “learners”. Also, if the group needs or wants more learners, everyone else can play the role of learners, e.g., they can be members of the general public in an auditorium, or be students in a school group.



# Activity

- The interaction must feature the object, use other materials as needed.
- The objects are:
  - Real, once-alive squid
  - Model of squid
  - Video of squid
  - Photographs of squids and other cephalopods
- Resources for design

*You have 15 minutes.*

# Observation Questions

- What are the participants doing with the objects?
- How are the learners and educator talking about the objects?
- How do you know? What is your evidence?

# WORK WITH PARTNER



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# Homework

- Reading
  - *Marine Biology*
    - Ch 18, The impact of humans on the marine environment, pp. 406-423.
  - *Surrounded by science*
    - Ch 7, Culture, Diversity, & Equity, pp. 119-137.
  - *Paper*
    - Crowley & Callanan 2001. Parents explain more to boys than girls.
- Activity Development
  - How do you use objects to engage learners and support learning in your activity?