

# Communicating Ocean Sciences to Informal Audiences

## Session 5: Designing an Activity

# Quick Write

# Sharing your experiences

- Describe an interaction with a visitor that you feel went well. What did you do and what was your evidence that it went well?
- What is something that you feel did not go well and what makes you think that?
- What questions or concerns do you have that you would like some feedback from the class about?

# Think-Pair-Share

## Key Characteristics of Exemplar Activities

- What are some characteristics for designing activities that you feel would make them exemplar activities?
- What are some characteristics of facilitation that would make an experience with a well-designed activity exemplary?

# Critical Review of Exemplar Activities

1. What is the goal of the activity and science concepts addressed?
2. What are learners able to do with the activities? How does exploration with materials help learners construct understanding?
3. What are facilitators able to talk about with the learners? How does the conversation help learners construct understanding?
4. What particular aspects of the activity made it effective?

# MATERIALS FOR YOUR USE

# Activity Design Starter

- What do you want the visitors to learn and experience? (i.e., your goals and concepts)
- How will you get learners interested in participating in your activity?
- How will you find out what the learners already know?
- What kinds of things will the learners actually do while engaging in the activity?
- What will you do as a facilitator to help them come to an understanding of the concept?

# Activity Development

- Learning Cycle as a model for instructional design
- Design is an iterative process
  - Plan, test, refine, repeat
- Design around **concepts**, not facts
  - A fact is a statement that is known to be true through direct observation.
  - A concept is an idea that can be applied in multiple contexts to understand and predict outcomes.



# Facts vs. Concepts

- Carnivore eats meat.
- Omnivores eat both plants and animals.
- Predators can be omnivores and carnivores.
- Animals obtain the energy they need to live from food.
- Organisms are connected to other organisms through food webs.
- A food web is a diagram of who eats whom in a given area.

# Peer Review of Activity Ideas

- Present your activity concept to another team
- Keep *Key Characteristics* in mind and note which ones have been incorporated into activities
- Questions to talk about:
  - How does the activity incorporate the *Key Characteristics*?
  - What can teams do to refine their activity to incorporate the *Key Characteristics*?

# Homework

- Reading
  - *Marine Biology*
    - The Ocean Depths (pp. 361-382).
  - Paper
    - *How people learn*, Chapter 5: Making thinking visible: Talk & argument (pp. 87-108).
  - *Surrounded by science*
    - Chapter 4: Learning with and from others (pp. 63-80).
- Activity Development
  - *Activity Design Starter & Science Content Paper* due in two weeks