1. Discuss the plant and arthropod interactions that students observed and recorded in their journals. Begin by returning to the predictions students observed and recorded in their journals. Begin by outlining the information you want to communicate, listing all of the topics. Then assign each topic a level of importance. Decide which media technique will most effectively communicate each piece of information.” —MELANIE IDE

(Planning an Exhibit, p.208)

TARGET QUESTION: How can we share with others what we have learned?

1. Discuss the plant and arthropod interactions that students observed and recorded in their journals. Begin by returning to the predictions students made about the associations they expected to find. Do the data support their predictions?

2. Classify the relationships students observed into three categories: mutually beneficial, harmful to the plant, and not certain. Make a chart and have students record their observations in each category. If there is disagreement, or if students are not certain, suggest that they do further research.

3. Ask students to summarize. Can you predict the
presence of a plant by the presence of an arthropod, and vice versa? Why do you think so?

4. Have students record their findings graphically. The resulting graphs will help to illustrate and detect patterns in the data. They may plot variables such as plant or arthropod species against several different parameters, such as temperature, precipitation, or soil type.

**ASSESSMENT: INTERCONNECTEDNESS**

1. Remind students that they will be creating an exhibit as their culminating activity. Ask them to think about which of the relationships they observed in their plots could be used in the exhibit to illustrate interconnectedness. Ask why they think the relationships they describe would help visitors understand more about the web of life.

2. Ask students to explain why understanding interconnectedness is vital for understanding biodiversity.

3. Return to the explanation of biodiversity students have been developing. Record their new understanding of interconnectedness on the chart or concept web.
LESSON 1
Planning and Concept Development

LESSON 2
Reviewing the Preliminary Materials
Planning and Scripting
the Exhibit
OVERVIEW OF CHAPTER 8

In the culminating chapters, students prepare their products for a public exhibition. While planning, designing, constructing, and installing their exhibit, they have a unique opportunity to use the same methods that designers and developers employ to mount actual museum exhibits. In the process, students must analyze their scientific work, interpret it, and communicate it to a wider audience, a vitally important aspect of the scientific method.

It is a collaborative process. Students can showcase their individual skills and talents, but they will also need to work together cooperatively to create a unified presentation.

BACKGROUND INFORMATION FOR THE TEACHER

An exhibition is a designed experience. Ideally it communicates one big concept in many different ways. Unlike a textbook or a bulletin board display, an exhibit asks the viewer to travel through a three-dimensional space and to absorb the big idea in a limited amount of time.

The exhibit should engage the visitors’
interest and invite them to explore the concept on different levels and in different ways. There is a planned, hierarchical order to the levels of detail presented in the exhibit. These may range from headline banners to interpretive text on specimen labels, or from the visual impact of massive collection of objects to an in-depth exposition of just one key object.

A well-planned exhibit can be laid out in a linear fashion, with an introduction, an expository middle, and conclusions at the end. Or it can be non-linear, in which the visitor can look at this in any order but would still come away with the central concepts and stories.

It is up to the visitor to decide how deeply and in what directions to explore the concept. Some visitors may have limited time, short attention spans, or only a fleeting interest in the topic. They stroll through, briefly scanning areas of the exhibit, and then move on. But even a superficial walk-through should give the visitor some understanding of the concept. The Director of Exhibitions at the Museum says, “Imagine a visitor who roller blades through an exhibit. Even she should come out at the other end with the big idea.”
THE EXHIBIT DEVELOPMENT PROCESS

The concept is the overarching and unifying element of the exhibit, so much care and thought go into its development. The Hall of Biodiversity exhibit at the AMNH, for example, is organized around four major concepts:

What is biodiversity?
Why is biodiversity important?
What are the threats to biodiversity?
What are some solutions to the problems?

All of the materials in the Hall are planned to contribute to the visitor’s understanding of those four big questions.

The task of defining and articulating the concept belongs initially to the design team. This core group consists of the exhibition designer, the exhibition developer, the scientist curator, the researcher, and the graphic designer. They decide what experience the audience should have and define the target audience. The team collects information on what that audience already knows and needs to know and evaluates their attitudes and current understanding of the topic.

Then, working with an ever-increasing circle of specialists, the design team begins to draft preliminary materials. They outline a script, analyze appropriate media, design the space, plan the budget, and decide if more research and collecting are needed. They also decide on a schedule for the completion of the project.

As work progresses, the complex pieces of the exhibit begin to take shape. They are constantly subject to scrutiny. Do they support the concept? At what level do they contribute to conveying the big idea? Can they be executed on time, fit in the proposed space, and stay within the budget? What will the visitor get out of the exhibit? Pieces are revised, expanded, or discarded depending on how they meet the criteria.

Then a more sophisticated version of the project emerges. At this stage, a floor plan is designed with specifications for placing all of the components of the exhibit. Designers consider where each component should go, how components relate to each other in space and time, and how the total exhibit flows to give the visitor a coherent experience. Things are now visualized in their final forms. The specialists can produce more definitive text, graphics, models, and media. Curators select specimens and decide how best to protect them while they are on exhibit.
Construction crews follow the architectural plans to build the cases and structures in the gallery that will house the exhibit. Other crews paint, wire, and furnish the gallery.

Finally, the exhibits are installed by the exhibit preparators, and the museum is ready for a public opening. For a major exhibit at the Museum, the whole process may take as long as four years from beginning to end.
# LESSON 2

## REVIEWING THE PRELIMINARY MATERIALS

### TIME
Several class sessions

### WEB COMPONENTS

- Organizing an Exhibit: It’s All About Teamwork
- OPTIONAL: Profile of Phil Fraley
1. **Give students time to discuss their ideas with teammates and to prepare sketches, first drafts, and mockups of the materials they plan to use in the exhibit. Then call them together to review what they have produced so far. Their products should include:**

- an outline of the script or story line
- an analysis of the appropriate media to use for the presentations
- an architectual design for the space
- a report on the preserved and living specimens and other artifacts selected to be exhibited
- rough sketches of graphics, illustrations, models, murals, dioramas

2. **Have students offer constructive criticism of the preliminary materials.** Ask them to evaluate whether the materials are appropriate, practical, suitable for the target audience, engaging, and supportive of the big concept at the heart of the exhibit. Also ask them to visualize the exhibit as a whole and to decide if the pieces are beginning to present a cohesive picture.

Develop a checklist of items that you have and items that you still need. Discuss how to get the items that you still need.

3. **Then, based on the feedback from the group review meeting, ask teams to flesh out their preliminary plan and produce a more detailed version. At this stage, products might be revised, expanded, or even discarded if they do not meet the group’s criteria.**

4. **Encourage the special teams to meet regularly and plan to schedule one or two more review meetings for the whole class.**

5. **Have students read the on-line article, “Organizing an Exhibit: It’s All About Teamwork.”** Discuss the article using some of these questions:

When Phil Fraley interviews people for a job, what does he look for?
How does Phil believe people will be successful at their jobs?
ASSESSMENT: PLANNING AND SCRIPTING THE EXHIBIT

1. Ask the class to take a few moments to assess their progress in developing their exhibit. Recognize that it is a challenging project and may be a new experience for them. Ask them to describe what has been most difficult for them.

2. Ask students to articulate the story line or script for the exhibit. Have them evaluate how well their story line represents what they have learned about biodiversity.