

Bret Schnieber
LABS 2001

Inquiry Lesson

Title: The Birds and the Bees, and the Flowers and the Trees

Lesson Summary: Students will examine the roles in which animals play in the pollination of plants by watching, researching, and then narrating the movie “Sexual Encounters of the Floral Kind.”

General Goal: The general goal of this lesson is to recognize the numerous relationships between plants and animals in the pollination process.

Duration: This activity will require 3 class periods, lasting 45 minutes each. The students will be presented with the assigned project, and required to prepare their presentation out of class. Two and a half class periods will be required for the presentation of the lesson.

Specific Learning Objectives:

1. Most flowers have male and female sexes.
2. Plants use outside sources for cross-pollination
3. There are adaptations of flowers for insects and other pollinators.

Prerequisite Knowledge/Skills for Students:

1. Observation skills.
2. General knowledge of the process of plant reproduction.

Background Information:

Materials: Individual video tapes, each containing a different 10-minute segment of the movie “Sexual Encounters of the Floral Kind.”

At the time of the presentations, various flower anatomy models will also be on display.

Instructional Strategy:

- 1. Engagement:** I will tell students that they are going to watch a movie unlike any other we have watched all year—one that is silent! It will be their group’s responsibility to supply the words explaining what they see in the video.
- 2. Exploration:** Students will watch, as a group of 4, their segment of the video. They will be given approximately 1 week to do this. While observing the video they

should be aware of the processes going on in front of them. This should be recorded in an outline form. This outline will be beneficial to the group when they go back to add words to their video for presentation to the class on the assigned date. Students should also be familiar with the kind of organisms present in their section of the video and the role they are playing. Individual species' scientific names are not the important concept in this lesson. What is important to observe are the relationships being exhibited by the various organisms in the pollination process.

- 3. Discussion/Explanation:** On their assigned date each group will present their section of the video, acting as the narrators to the entire class and teacher. Their job is to report to the class what is taking place in the video and the importance this has to biodiversity. While this is taking place the rest of the students will be taking notes on what is being reported. This is important because as soon as the video presentation is complete I will replay the real version of their segment of the movie to compare the accuracy of the group's report.

Students should be able to conclude that there are more organisms than bees that aid in the pollination process. They should also realize that cross-pollination is very difficult when they are literally rooted, yet it must occur for genetic variation. The last thing students will see are the male and female sex parts of plants.

Assessment: Two different groups will be assessed during this activity—those doing the presentation, and those in the audience. Here are examples of assessment methods for each:

1. Presenters (narrators)—Assessment will be based upon the outline that is turned in during the narration. It needs to include observations made during the analysis of the film and what relationships were discovered.
2. Audience—3x5 card quizzes can be given either after each presentation or at the end of class. An example question would be.....What have flowers evolved to keep animals coming back? What is your evidence?

Comments: When distributing this video it is important that the students are NOT told the name of the video, and that it doesn't appear in or on the cassette. This will eliminate all possible chances for students to watch the real version and possibly cheat by hearing what is going on, and ruin the inquiry emphasis.