

Problem Situation/Rationale

This lesson is designed to expose students to the concept of plant adaptations. Students need to understand that plants have made significant evolutionary changes to meet the demands of their environments. The move to land from an aquatic existence was only the first of many adaptations plants have made to overcome a changing environment. As plants have spread to all regions of the earth they have been forced to adapt to meet the requirements for survival. Therefore, the students will be asked to address the following scenario:

You are the head scientist of a botanical research team that has recently returned from a long collecting expedition. The people you work for, The PlanTech Foundation, have requested a detailed presentation of your findings from the trip they have sponsored. The Foundation would like to know where you have been this last year, what you have discovered and what impact your findings will have on the scientific community. In other words, how have you spent your \$1.25 million grant!

Your team has seen many interesting things, but none more exciting than the new plant species you have brought back to the States. This discovery was made late in the trip and so you and your colleagues have had only a few weeks to study it in its natural habitat. It will certainly be fun to see if it will thrive in the lab. You were able to run many tests to determine the chemical make-up of the plant. The many hours your team spent observing the plant in the wild will certainly help to explain its ecology.

The PlanTech Foundation requires that you report your research findings in a multimedia HyperStudio presentation. Please see the grant guidelines to review the criteria for this project. Begin immediately as your time is running out.....

Concepts Involved

Identification of plant species, scientific classification, plant adaptations, presenting scientific findings in a multimedia format.

Subject Matter Involved

Botany, ecology, geography, communication.

Instructional Objectives

The seventh-grade science student will:

- describe a fictional plant's characteristics and adaptations to its environment
- describe economic and societal benefits of plants
- draw and label a fictional plant
- scan this drawing and drop into HyperStudio stack
- take a QuickTake photo of themselves and drop into HyperStudio stack
- present findings in HyperStudio format

Corresponding Assignments

1. Grant guideline worksheets for each section
2. Plant species identification tutorial (HyperStudio stack)

Technology Requirements

6 multimedia Macintosh workstations, HyperStudio (version 3.0 or greater), QuickTake cameras, scanners and appropriate software.

Classroom Management Requirements

Individuals will be asked to complete the grant guideline worksheets for each section before moving to the computers to create that card of their HyperStudio stack. Project will last approximately 5-7 days.

Instructional Procedures/Strategy

Introduce problem and outline 'Big Picture'. Demonstrate HyperStudio by showing example stack entitled "A Day in the Life of a TMS Student". Explain the procedures for creating and saving a HyperStudio stack and refer students to the help guides containing this information. Be available for help when necessary.

Explain that students will need to complete each grant guideline worksheet in order to gain access to the computers to make their HS cards. Team members must ALL complete each step before moving on to the next. Introduce resource files to allow students to "conduct research". Circulate and ask Q's to keep students on-task. Guide students if needed. Assist with multimedia (troubleshoot) when necessary.

Students will select the best project from their team to present to the class on the designated day.

Evaluation

Students will be evaluated on their multimedia HyperStudio presentations according to the criteria in the attached evaluation criteria sheet. This rubric will be given to the students following the introduction to the project.