

MAISA and the REMC Association of Michigan Best Practices in Technology Integration Plan

Title: Butterflies: In the Classroom And on the Web

Subject(s): Science

Intended Grade Level(s): 3 - 5

Description:

This unit allows the classroom to integrate the raising of butterflies from the caterpillar stage with the production of an Internet website to share acquired knowledge and adventures with other classrooms.

Curriculum Benchmarks:

[MI.SCI.I.1.E.1](#) . Generate reasonable questions about the world based on observation

[MI.SCI.I.1.E.5](#) Develop strategies and skills for information gathering and problem solving.

[MI.SCI.II.1.E.4](#) Develop an awareness of and sensitivity to the natural w(71)

[MI.SCI.III.2.E.3](#) . Describe life cycles of familiar organism

[MI.SCI.III.2.E.4](#). Compare and contrast food, energy, and environmental needs of selected organism)

[MI.SCI.III.4.E.2](#) Explain how physical and/or behavioral characteristics of organisms help them to survive in their environm

[MI.SCI.III.5.E.3](#) Describe the basic requirements for all living things to maintain their existence

[MI.SCI.III.5.E.4](#). Design systems that encourage growing of particular plants or animals.

[MI.SCI.III.5.E.5](#). Describe positive and negative effects of humans on the environment

Materials/Hardware/Software:

Aquarium (or similar container) to house the caterpillars/butterflies

Caterpillars

Milkweed (food for the caterpillars that is found in most fields throughout the country)

Web publishing software (Netscape Gold, Microsoft FrontPage, or any other web publishing software)

Space on an Internet server

Computer with Internet access

Reference books and materials (there is an abundance of materials on caterpillars and butterflies at most local libraries and on the Internet, encyclopedias, magazines, etc.)

Camera (if you would like to include pictures of the caterpillars / butterflies or during the unit)

Activities/Procedures:

Collect or purchase a number of caterpillars (these are abundant during the late summer and can be found feeding on milkweed plants). These caterpillars can be kept in the classroom in an aquarium or similar holding tank covered with a mesh netting. The primary food of caterpillars is milkweed, and this needs to be changed on a daily basis.

While the students participate in the raising of the caterpillars, each student should keep a journal that describes the transformations that the caterpillars are making, questions that they may have, and other observations. This science unit can be integrated with a language arts unit by including different sources of literature that pertain to caterpillars and butterflies. A pictorial record can also be assembled as the unit progresses.

As the caterpillars begin to form their chrysalis, at least some of the students will begin to wonder what happened to the caterpillar and what is going on. This provides an excellent opportunity to discuss the life cycle of a butterfly, beginning with the larvae stage. Many additional questions will arise from this discussion that should be recorded in the students' journals.

As the butterflies begin to emerge from the chrysalis (from 7 - 14 days later), additional discussion can continue about the life of a butterfly, including feeding and migration. Students should continue to maintain daily records of their observations.

After the butterflies are released, the students can begin to assemble the information and observations that they have collected throughout the unit. This information will create the foundation for the website.

Working in small teams (3 - 5 students each), the students should collect additional information in order to produce a website which covers one specific topic about butterflies that they thought was important, interesting, or intriguing (i.e., a general overview of the life cycle, why does the chrysalis have a gold ring around it, the food sources for caterpillars, what is the difference between butterflies and moths, what is the difference between a cocoon and a chrysalis, etc.)

This information can then be placed onto web pages using web publishing software (most packages are as easy to use as a word processor). The pages can be combined into an educational website that other classrooms can use in the spring or in future years.

Assessment/Evaluation:

Since all of the web pages will be collected into one website, the students should be given the responsibility for assessing and improving each web page. If it is necessary to assign grades to individual students, feedback forms or web counters can be included in the website to provide feedback and assessment on the individual pages or the entire website.

Follow-up Activities:

Using the website, students can teach a short unit on butterflies to other classes, especially younger students.

Name: Jody Payne

School District: Haslett Public Schools

School: Ralya Elementary School

Address: 5645 School, Haslett, MI 48840