

Crazy Critters

OVERVIEW:

Grade Level: 8 (May be adjusted for all ages.)

Lesson Length: Two 50-minute class sessions

SOURCE: Texas A&M University, Department of Entomology

- URL: <http://iitc.tamu.edu/1998and2000/lessons/lesson27.html>

PURPOSE:

The purpose of this lesson is to allow students the opportunity to explore and collect insects from their schoolyard. The students will return to class and record the habitat in which the insect lived. They will identify the insect by using the materials provided by the teacher. They will then be given directions to aid them in writing a report on their pet. They will need to include the insect's kingdom, phylum, class, and order. In addition, the students must include the insect's food source, life span, landscapes inhabited in, inherited traits, and any other interesting information that they find.

TEKS:

(1) Scientific investigation and reasoning. The student, for at least 40% of instructional time, conducts laboratory and field investigations following safety procedures and environmentally appropriate and ethical practices. The student is expected to:

(A) demonstrate safe practices during laboratory and field investigations as outlined in the Texas Safety Standards

(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:

(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology

(4) Scientific investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:

(A) use appropriate tools to collect, record, and analyze information, including lab journals/notebooks, beakers, meter sticks, graduated cylinders, anemometers, psychrometers, hot plates, test tubes, spring scales, balances, microscopes, thermometers, calculators, computers, spectrosopes, timing devices, and other equipment as needed to teach the curriculum

MATERIALS:

- Journal Notebook
- Container to be used for bug collection
- Marker
- Research materials
- Sweep nets
- Other collecting materials
- Zip lock bags

OBJECTIVES:

1. The students will be able to safely and effectively collect data from a field.
2. The students will be able to observe and measure the collected data and process it into a research report.

PRIOR KNOWLEDGE:

Previous to this lesson, students have had other lessons pertaining to taxonomy. They also know the definition of an insect, their body parts, and know how to write a report. In addition to the above, the students know the differences between a habitat and an ecosystem.

1. Habitat: the natural home or environment of an animal, plant, or other organism.
2. Ecosystem: a biological community of interacting organisms and their physical environment.

Source: Oxford Dictionaries

- URL: <http://oxforddictionaries.com/>

ACTIVITY:

Throughout this lesson there are numerous activities. The first will be the actual exploration and bug collection done in the schoolyard. The teacher will demonstrate the different methods of bug collection by using a sweep net and a beat net. The teacher will encourage students to be creative and look in places where they might find the most interesting specimens of insects. Students will have approximately 40 minutes to do the exploration and collection. The students will be asked to take their bugs home and choose one that will become their pet for two weeks. They must come up with a container and food sources for their individual insect. They are responsible for identifying their insect. They will be able to use teacher's resources and other references.

During the next class period, the teacher will inform them of the research report that they will be completing during the next week. This report should be typed, double spaced, 3 pages minimum, and include information like the insect's taxonomy, food source, life span and any other interesting information that the student wishes to include. After explanation of the report, students will have an opportunity to start researching their insect. The actual report will be turned in one week from date of assignment. Students will be allowed to discuss amongst themselves but the writing will be individual. With the report, students will also turn in a hand drawn picture of their insect with body parts labeled.

SAFETY:

1. Stay away from plants that may be poisonous
2. Try to quickly trap insects - some sting or bite
3. If any incident occurs, locate teacher immediately

CONCEPT DISCOVERY

After students have had the opportunity to explore and inquire, there will be a class discussion. Some questions teacher may ask include:

- Where were the most bugs found?
- Why do you think they were located in that habitat?
- Which were the hardest to catch?
- Would bugs be more likely to be found under rocks or out in open areas?
- What do you think they eat? Why?

This question/answer session will be used to spark interest in the insect research that the class will be participating in throughout the report.

GOING FURTHER:

The extension of this activity will occur partly as student's care for and record observations of their pet insect. They will need to keep records for two weeks. Teacher will go further into landscapes, ecosystems, and habitats and how the environment depends on insects to function. This will carry on into the next lesson.

CLOSURE:

Students will share their reports and pet insects with the class. Then, they will summarize the events of the past two days.

ASSESSMENT:

Students' reports will be assessed on thought, creativity, writing quality, insect information, drawing, and overall participation.

CONNECTIONS:

This lesson is not only a science lesson, but also encompasses numerous language skills. The research report will be graded on proper language usage, spelling, and sentence formation. Also, this lesson could be connected to social studies and how different human populations work together in our society. This idea would coordinate to how different insect populations work together to make the whole landscape function.