

Insect Biodiversity Lesson Plan

Grades: 5 - 8

Length of Program: 1 - 1 ½ hours

Time of Year: Late spring, summer, early fall

Preferred Adult/ Student Ratio: 1/5

Summary:

This program begins with an exciting look into the basic morphology of insects. Through the process of transect sampling using insect nets, your class will get a chance to compare the presence of different species and populations in various vegetational areas. By studying the different specimens caught, students will be able to compare their adaptations, survival needs, and day-to-day interactions.

Teacher Preparation:

Review the definitions of insect, and metamorphosis

Academic Standards Addressed:

Science

F.8.2 Show how organisms have adapted structures to match their functions

F.8.8 Show how organisms both depend on and contribute to the balance of populations or ecosystems

Environmental Education

B1.8.3 Explain the importance of biodiversity

Special Instructions:

Please make sure students are dressed appropriately

Materials:

- Insect Sweep Nets
- Collection Sheets
- Bug Boxes
- Tally Worksheet
- Pencil and Clipboard
- Insect Field Guides
- Insect Metamorphosis Display

Procedure:

Review with the students the characteristics of an and the concept of biodiversity. Explain that they are going to perform a biodiversity study in which they will look at the differences between insects that live in different habitats. Divide the students into groups of 4 - 5. Give each group a sweep net, bug box, collection sheet, tally worksheet, pencil and clipboard.

Take the students to a section of the prairie that has a high diversity of plants. Explain that they will take turns catching insects with the sweep net. The first "sweeper" will go into the prairie and sweep the net 15 times as they walk along a transect (in a straight line). After 15 sweeps, that person should close up the net and hand it to the 2nd "sweeper" who will

also do a transect. When they have both finished, they should take the net over to the rest of the group and slowly dump out the contents of their net onto the collection sheet to see what they caught. One of the students should keep track of the "catch" on the tally sheet. Walk among the different groups, asking them to look for different colors, adaptations, etc. that the insects have.

After about 15 minutes, gather the group together and find out what their results are. Ask them what similarities they found among the insects of the prairie in terms of behavior and adaptation. Were there any insect types that showed up a lot more than others? Show the students the metamorphosis display, explaining the two types of change insects can go through. Ask the students which of the different life stages they were able to find in their catches. Discuss how the insects they caught fit into the broader web of life.

Take the students into the woods and repeat the process. After about 15 minutes, gather the group together and again go over the results. Ask them if they saw a difference in the types, numbers or, and colors of the insects. Why might this be?

Wrap-up:

Discuss biodiversity as it relates to other wildlife. How do other types of animals differ based on the habitat they are found in?