

Comparing Insect Mouth Types

Background:

Students will already be familiar with various types of insects and will have the understanding that there are many different characteristics that differentiate the orders.

Objectives:

Students will understand that there are four general mouth types found in insects: piercing-sucking, sponging, siphoning, and chewing. Students will be able to identify and differentiate between the various forms of insect mouthparts.

Materials:

Plastic Ziploc bags, Pieces of Sponge, Water, Straws, Push-Pins, Styrofoam Dish

Procedure:

1. Divide students into groups of four or five.
2. Give each group one pushpin, one dish and one large cup of water
3. Give each student one Ziploc bag, one straw and one piece of sponge.
4. Discuss with students the various moth types found on insects.
Give examples of the type of insect that would have each mouth type: Chewing-Beetle, Piercing-Sucking-True bug, Sponging-House fly, Siphoning-Moth/Butterfly.
5. Next, tell students that they will have the opportunity to experience eating with each mouth type. Direct students through each mouth type having them first mimic the action of chewing.
6. Then have children put a small amount of water in their bag and on the group dish. With a push-pin, have students punch a small hole in their bags and try sucking the water out. Explain that this is how true bugs eat.
7. To experience how house flies obtain nutrients have students wet their sponges and drink the water from the sponge.
8. Finally, explain that butterflies and moths drink the nectar from flowers and are able to do so because they have straw-like mouthparts. Have students drink the water from the plate using their straws.

Assessment:

Discuss with students their reactions to the activity (what they feel was the most useful way of obtaining nutrients, the easiest, the hardest, etc.) Suggest a journal writing activity in which students think of other types of insect mouth types and why they might be helpful or harmful.

Going Further:

Have students think about why it might be useful for insects to have different mouth types from a plant's perspective and from a human's perspective.