Post Visit 1
Getting Buggy Activity – K-5
Bug Buffet

Objectives

- Students will learn about entomophagy (the eating of insects)
- Students will make and eat chocolate covered crickets

Materials

- 25 adult crickets
- Several squares of semisweet chocolate
- Cookie sheet
- Pan
- Hotplate
- Wax paper

Activity

Before class, wash 25 crickets and spread them out on a lightly greased cookie sheet. Set your oven to 200 degrees. Dry insects approximately 1-2 hours in the oven.

During class, discuss with your students about foods other countries in the world eat on a regular basis. Students will be surprised to hear that most countries in the world eat insects as part of their regular diet. The eating of insects is called entomophagy.

Heat the squares of semisweet chocolate in a pan until melted using the hotplate. Have students dip the dry roasted crickets in the melted chocolate one by one. Set the chocolate covered crickets out to dry on a piece of wax paper. Let the eating begin!

Pre Visit 1
Getting Buggy Activity – K-5
Creature Creator

Objectives

- Students will discuss characteristics of insects.
- Students will design and create their own unique insect.

Materials

- Straws
- Tape
- Colored sharpies
- Scissors

Activity

Have students describe insects. What characteristics do they require in order to be an insect? (6 legs, antennae, 3 body parts, most have wings, compound eyes). Ask students what percentage of the world's animals are insects (about 95%). There are over 1 million named insects in the world. Scientists think there may be as many as another 10 million that haven not even been discovered yet. Ask students are insects beneficial to us. How are they beneficial?

Tell students they are going to have fun creating their own insect. Ask students what they would like their insect to look like? How big? What color? Give each student 5 straws to create their insect. Place tape, sharpies, and scissors at each table. Encourage students to be creative in the design of their insect. Let them build. They can cut their straws into smaller pieces if needed. They can use the sharpies to draw eyes, wings, etc.

Discussion

Let students share their insects with the class. Have them discuss the characteristics of their insect.

Pre Visit 3
Getting Buggy Activity – K-5
Predator Prey Game

Objectives

- Students will learn about the unique interactions between predator and prey
- Students will play the predator-prey game

Materials

://www.uga.edu/srel/kidsdoscience/predator-prey/game-rules-only.
http://www.uga.edu/srel/kidsdoscience/predator-prey/predator-cards.pdf
http://www.uga.edu/srel/kidsdoscience/predator-prey/prey-templates.pdf
http://www.uga.edu/srel/kidsdoscience/predator-prey/game-data-sheet-only.pdf
http://www.uga.edu/srel/kidsdoscience/predator-prey/compost-pile-sign.pdf

Activity

In this game students assume the role of “predator” and must locate appropriate prey items that have been placed throughout the room. Predators include: bobcat, hawk, alligator, bullfrog, kingsnake, and praying mantis. Prey species include snakes, frogs, mice, fish, insects, and rabbits. Students will “stalk”, “kill”, and “eat” as many prey as they can in five minutes. Individual predator successes can be compared and concepts related to food quality, energy allocation, and prey adaptations can be discussed.

Predator species cards are printed on letter-sized paper and placed in plastic page protectors for durability. "Predators" wear the cards around their necks to remind them which prey species they must locate during the game. Predators must "kill" and "eat" certain numbers of specific prey items to "survive" (see). Predators that cannot find enough of their designated prey species must go to the "compost pile."

Prey species are cut from various colors of paper using the provided and are distributed around the room with doubled-sided tape. Approximately 1/3 of the prey should be cut from brightly colored papers that can be clearly distinguished from the backgrounds of the room. The remainder of the prey are cut from digital photographs of objects and surfaces in the actual room (knowledge of Adobe Photoshop is a big help here). This ensures that many of the prey are camouflaged in the room, making it more challenging for the "predators" to find their designated food sources.

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Pre Visit 4
Getting Buggy Activity – K-5
Can you see it?

Objective

- Students will be able to define camouflage
- Students will be able to define adaptation in regards to insect camouflage

Materials

- White bread-4 slices, crust removed
- Red, Blue, Green food coloring
- Cookie sheet
- Scissors or knife
- Water
- Open, outdoor area with short grass
- Rope or flagging tape
- Measuring tape

Procedure

Before class

1. Cut each slice of bread into 20 pieces.
2. Mix 10 drops of each food coloring with ½ cup if water. Keep in separate cups.
3. Place 20 pieces of bread in the red, 20 pieces in the blue, and 20 pieces in the green food coloring. Leave the remaining 20 pieces white.
4. Take the pieces of bread out and let them dry on the cookie sheet.

Classroom lesson

With little explanation, ask the students which colors of food animals are most attracted to. Do they prefer brightly colored foods or duller colors? If you were an insect, what color would you want to be and why if you saw a hungry bird flying around? Give students time to discuss. Animals with colors that blend in with their environment are called what? (Camouflaged). Let's go out now and test an experiment on camouflage.

Activity

1. Measure out a 20 square feet area (using the students to help) where short green grass is growing. It works even better if it is an area where birds feed on a regular basis.
2. Break the students into pair teams. Each team gets 1 red, 1 blue, 1 green, and 1 white piece of bread. Tell the students the bread represents an insect. Let the students know the food color on the bread will not hurt the birds.
3. Tell student teams to place their pieces of bread next to each other in the 20 square feet grassy area.
4. Let students know they will get to check on their bread at the end of the day.

Discussion

Ask students what color of bread the birds will eat? Why? Which colors of bread will be left behind? Why? So, what color would you want to be if you are an insect? More of the green pieces of bread should be left behind (unless you have really hungry birds!). The green pieces of bread blend in (or camouflage) easier in the green grass. At the end of the day, have students check their bread and count which pieces have been eaten.

Pre Visit 5
Getting Buggy Activity – K-5
Flash Dance

Objective

- Students will learn to communicate with light signals in order to understand how insects communicate.

Materials Needed

- Flashlights, one for every two students in the classroom
- 3 x 5 cards
- Black cloth or posterboard

Procedure

Divide the students into pairs and give each pair a flashlight. Have the students devise a code for communicating with each other using flashes of light. Suggest that they use some long flashes and some short ones and that they limit the total number of flashes to less than seven. Have each group write their names and their code on a 3 x 5 card which they will give to the teacher. No codes should be exactly the same; in case of duplication, the second group to turn in their card will have to alter their code.

Turn the lights out in the room, or go to a place in the school where the light is dim. Devise some system whereby students with flashlights will be hidden from the view of their "mate" but their lights will be visible. Suspending a sheer black cloth in a doorway would be one way to accomplish this. Having the students flash the light against a black posterboard but from around a corner would be another. Have three students at a time go outside the room or behind the curtain so that their partners will not know which student is flashing his/her light at a given time. While one student is observing the flashes, the other two participants should turn their backs so that they will not be influenced by another student's decision.

Have the students with the flashlights record on a sheet the order in which they flashed their signals. Have their partners record which of the three signals belonged to their "mates." When each group of three has completed the experiment, record the number of correct responses.

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Pre Visit 2
Getting Buggy Activity – K-5
Butterfly Life Cycle

Objectives

- Students will explore and identify the four different stages of a butterfly life cycle (from egg, caterpillar, pupa or chrysalis, to a full-grown butterfly).
- Students will understand the life cycle stages of a butterfly are similar to humans growing from a baby to an adult (baby, child, teenager, adult).

Materials

- The Very Hungry Caterpillar by Eric Carl
- *Butterfly Life Cycle* poem by Suzy Gazlay
- Paper plates (one per student)
- Colored pencils (handful per table)
- Ziploc bags (one per student)
- Glue
- Various forms of pasta (prepared in Ziploc bags by the teacher)
  - pastina (egg)
  - curly colored pasta (caterpillar or larva)
  - shell pasta (pupa or chrysalis)
  - bow-tie pasta (adult butterfly)

Activity

Invite the students to the carpet. Introduce the reading selection *The Very Hungry Caterpillar* by Eric Carle. With the class, discuss some of the butterfly facts listed in the book. Have students describe the stages of their lives. How are the stages of your life similar to the stage of a butterfly? Compare and contrast the stages of the butterfly to the stages of a human. Explain that both butterflies and humans develop through four main stages: **butterfly**: egg, caterpillar, chrysalis and adult butterfly; **humans**: baby, child, teenager and adult. Invite the students back to their seats. Distribute a paper plate to each of the students. Invite the students to take a colored pencil and draw four equal parts on the paper plate. Model this concept for the students, while walking around and monitoring the students' progress. Direct the students' in the labeling process. The students will need to write the four different stages of the life cycle of a butterfly. Distribute a small Ziploc bag to each student. The Ziploc bag will contain four different types of pasta. Each piece of pasta will symbolize the various stages of the life of a butterfly. Direct the students in placing the appropriate pieces of pasta in the correct life stage of the butterfly. Let students glue their pasta to the correct stage of life.

Discussion

Ask various students to share their interpretations of the butterfly life cycle plate. Have students explain the different stages. Introduce the *Butterfly Life Cycle* poem by Suzy

Gazlay. The poem will act as a form of reinforcement for the students. Read the poem aloud and ask students to try the second time together.