Spider & Insect Detectives

Grade Level: 1st-2nd

Lesson Overview

This lesson will introduce students to the differences between a spider and an insect. The students will participate in a collaborative group activity and complete individual Venn diagrams for assessment. In addition, there are some extension activities for review and enrichment.

Correlation with National Standards

National Science Teachers Association (NSTA)

- Science as Inquiry: Content Standard A: Abilities necessary to do and understand scientific inquiry
- Life Science: Content Standard C: The characteristics of organisms

Estimated Lesson Time

- Preparation: 20 minutes
- Lesson: 45 minutes

Materials Needed:

- Copy the "Classroom Bug: Insect or Spider?" sheet on overhead transparency.
- Copy the "Body Parts" sheet on overhead transparency .
- Copy the bug cards. Make enough for each group of students to share during the cooperative group activity.
- Copy the magnifying glass sheet. Make enough for each student to have one. Cut out the circle in the middle of the magnifying glass and laminate it. It will be a pretend magnifying glass that students will enjoy using over and over again. You may use real ones if available.
- Copy the "Spider or Insect" chart. Make enough for each group to have one.
- Copy the "Spider vs. Insect" Venn Diagram for each student.
- Optional Extension: prepare extension materials.

Student Materials Needed:

- Scissors
- Pencil

Lesson

Set the Stage

The teacher will capture the students' attention by telling the kids about a strange bug found in the classroom and asking for their help determining if it is an insect or a spider. Show the overhead. Ask the students to raise their hands for those that predict it will be an insect and those that predict spider. Tell the students you are going to investigate as a class.

Discussion

Tell the students that you did some research today and learned that a spider has four pairs of legs. Remember that a pair is two, so how many legs does a spider have if it has four pairs? Draw tally marks on the board if needed for an illustration. Yes, that's right, eight legs in all. An insect only has three pairs of legs, or six legs in all. Spiders do not have wings; insects can have wings. Spiders have two body parts and insects have three body parts. Show the Body Parts diagram on the overhead. The teacher should point out the different body parts on a spider and on an insect. The cephalothorax and abdomen of a spider and the head, thorax and abdomen of an insect. Spend some time discussing these parts. Insects have two antennae that help them smell. Insects sometimes have wings; spiders never have wings.

Spiders are called arachnids, which means they are a type of bug with four pairs of legs and a body divided into two regions. Scorpions, mites and ticks are also arachnids. Spiders can produce silk and most of them make webs.

Spiders and insects are alike in some ways too. They both have hard, outer skeletons. They both have eyes (although the number does differ: insects have two eyes and spiders have eight eyes). They both have a mouth and legs.

Do any of these facts help us determine if the bug I found is a spider or an insect? Yes, we have solved it! It's a spider.

Group Activity

Tell the class they are ready to become Bug Detectives. Pass out the pretend magnifying glasses or real ones if you have them. Now, divide the class into groups of four so they can work together as Bug Detectives. Hand out one bug card sheet to each group and have them cut out the bugs on the worksheet. They will lay each bug down either under the insect or the spider column of the spider or insect chart. Walk around and make sure they are discussing and working together as a group. Check their work as you are walking around. Collect the bug cards and sheets.

Individual Activity

Now it is time for individual assessments. Hand out the Venn diagram and instruct students to fill in at least three things they remember about a spider in the spider circle, three things about an insect in the insect circle and three things that they have in common in the overlapping space. Have a copy of the Venn diagram to put on the overhead and point out where the facts will go in case students are not familiar with Venn diagrams.

Ask the students a final question: Is a spider an insect? They should overwhelmingly answer, **"No!"**

Extension activity #1

Math sheet on pairs (introducing multiplication by twos)

Extension activity #2:

Read the books *Everything Bug: What Kids Really Want to Know About Insects and Spiders* by Cherie Winner or *Simon and Shuster Children's Guide to Insects and Spiders* by Jinny Johnson

Assessment:

Students will be assessed on their:

- Participation in the cooperative group activity
- Accurate completion of the Venn diagram

Classroom Show and Tell

Teachers, book a Terminix Expert to present to your class. Go to www.harrysbigadventure.com/learning-center.