



7. *Crawly Creatures*

Description: Students look for insects, spiders, and other arthropods. The survey leads into examination of habitats.

Objectives: Students will:

- discover what insects, spiders, and other arthropods live in the bosque; and
- learn the differences between insects, spiders, and other arthropods, some of their natural history, how they benefit the bosque ecosystem and the habitat in which they are found.

Materials:

1. bug boxes—one for every three students; small box with magnifier top is best, but any small clear vial or jar with a cover and a magnifying lens will work.
2. insect nets (optional)
3. extra small jars
4. home-made Berlese funnel (large funnel with coarse screen material covering the narrow opening) and bucket to set the funnel on (optional)
5. insect guides—one for instructor; use student pages in “Pitfall Trapping” activity and/or Appendix E: Arthropods
6. paper and markers

Procedures:

1. Review Appendix E: Arthropods in this book for an overview of the insects, spiders and other arthropods that live in the Rio Grande bosque before doing this activity.
2. Define the area for the activity. It can be “stay between this path and the river” or “within ten paces of this path” or whatever is appropriate. Many areas in the bosque look alike and if separated from the group, students can get disoriented and feel lost.

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Grades: K–8

Time: approximately 45 minutes

Subject: science

Terms: *arthropod, habitat, Berlese funnel*



3. Explain how to use the equipment.
 - a. Bug boxes: Spot an insect on the ground or a plant, carefully encourage it to go in the box and quickly put the cover on. Look at it with a magnifying lens. Pass it around for other students to see. Return it to the area where it was caught.
 - b. Insect nets: Students sweep through plants or grasses; then tip the rim of the net sideways or up-side down so the rim closes the net; and look at what they have caught. They can ease a jar and cover into the net, to capture some of the bugs and get a better look at them. Always return the insects to the place where they were caught. Insect nets must be returned free of any debris. Sometimes the sweep collects mostly grass seeds, so students must take the time to clean the net.
 - c. Berlese (pronounced burr-LAY-see) funnel (one set-up for the whole class): Get a large funnel and put a piece of screen across the bottom to cover the hole. Set the funnel in a bucket or large can, so the tip of the funnel is not touching the bottom of the bucket. Get a handful of leaves and other soil-surface material and place in the top of the funnel. You can set the bucket with the funnel in it under a bright lamp and wait a day or, alternatively, you can shake the funnel and bucket together. After a while, there should be crawly creatures in the bottom of the bucket. You have to look carefully; some are almost microscopic!
4. Briefly discuss the difference between insects, spiders, centipedes millipedes. See “Pitfall Trapping” and/or Appendix E.
5. Divide the class into groups of three. Provide each group with two or three bug boxes and one piece of collecting equipment. Use these other collecting tips: look under rocks or wood, roll the rock towards you; this reduces the chance of getting bitten by something hiding underneath—it will strike toward the opening, which is away from you. Always return the rock to the same resting spot. Why? Animal homes are underneath. Do not collect wasps, bees, or black widow spiders; all can give a painful sting or bite and some students may be allergic to them. It is best not to handle critters with your hands. Emphasize putting things back where they were found and treading lightly on the ecosystem.
6. Let students explore for at least 15 minutes. Wander among groups to help them identify their finds.
7. Call the groups together in a large circle. Have the students pass their bug boxes around the circle so everyone gets a chance to see what was caught. On a piece of paper, make a list of the



critters collected. Provide interesting tidbits of natural history related to the creatures collected.

8. Introduce the concept of habitat (the arrangement of food, water, shelter or cover and space suitable to animals' needs). You are in a riparian habitat, but each critter will have its own particular mini-habitat. Have students describe the specific habitat for each of the types of critters caught, i.e., grass, large tree, leaves on the ground, etc. On the paper draw a chart with the categories of habitat at the top and list the insects found at each habitat at the bottom.
9. Discuss what contributions insects make to the ecosystem (food chain, soil aerators, seed planters, pollinators etc.). Discuss what contributions insects, spiders, and other arthropods make to humans (seed planters, pest control, food producers).
10. After the discussions, have students release their catches in the same place they were found.

Extensions: Use the cards in NatureScope Incredible Insects Discovery Pac to look at some of the cool characteristics of insects.

Use the microscopes to look at some of the insects back at school.

Reference: NatureScope Incredible Insects Discovery Pac. 1988. National Wildlife Federation, Washington, D.C.