

# Buggin' Out

**GOALS:** Students will use a fun scientific investigation to explore the diversity of arthropods found at the SMNHC, and the reasons and importance behind that diversity.

**TIME:** 30 min. – 1 hour

**MATERIALS:** Bug nets, bug boxes, white board and dry-erase marker, eraser.

**PROCEDURE:** Divide the students into groups (of 2-5 students). Explain that the students will be searching for arthropods, and, of course, what an arthropod is and what some examples of arthropods are. Have each student make a hypothesis about which arthropod will be the most commonly found. Establish boundaries of the hunt. Explain some methods of finding bugs (especially sweeping vegetation & that the nets are fragile. Assign one recorder per pair, to write down the kinds and numbers of different arthropods found in the “hunt”. Each group will find and identify as many arthropods as they can in about 15 minutes. They can use the bug nets to catch bugs that they can't easily identify or want to get a closer look at. The microscope bug boxes can also help the students identify and/or examine an arthropod more closely. Lay the white sheet out. Have the students turn their nets inside out & shake them over the white sheet after sweeping vegetation; It is easier to see tiny bugs this way. It is very important that the students avoid touching aggressive, biting, or stinging arthropods like spiders, centipedes, ants, flies, etc. and do not try to catch bees or wasps. ‘Box-elder Bugs’ also bite easily. Those arthropods should be treated with special respect. Halfway through the collecting tell the recorder to become the bug collector & vice versa. At the end of the hunt, tally the numbers recorded by the different groups (using the white board) and help the students explain the reasons behind the findings. Wrap-up the activity by discussing the different roles of the different arthropods found in the hunt.

**VARIATIONS & EXTENSIONS:** Instructors should feel free to adapt and modify as they see fit. Other wrap-up possibilities include comparing the arthropod varieties found in the meadow to those in the Pinon-Juniper (like Quadrats). Students can use our simplified or technical arthropod key on the bugs to determine which group they're in.

## **BACKGROUND INFORMATION:**

Phylum Arthropoda -- "jointed foot":

- Exoskeleton (encases internal organs, support, protection)
- Segmented body
- Jointed legs

Examples include insects, crustaceans, arachnids, centipedes, and millipedes.

More information about arthropods can be found on our arthropod information sheet

**OTHER CONSIDERATIONS:** This is not a good activity for a class with students who are allergic to certain arthropods like bees. In general, avoid the arthropod hunt in areas where there are known high concentrations of wasps and bees. If possible, assign one adult per group of students. Remind students to watch for cactus and not to kill anything. Have some bug books available for students or yourself if stumped.