## Critter Scene Investigation Background

The Critter Scene Investigation (CSI) introduces students to arthropods that live in Sabino Canyon and explores some of the unique habitats and microenvironments found in Sabino Canyon. CSI can give the students a new understanding of and respect for the critters in our environment that are often designated as “pests.”

### Structure and Adaptations

Define **arthropod** by identifying the defining traits; then, using large plastic models, compare insects and arachnids, discussing their major morphologic structures and the adaptations they have made.

### Life Cycles

Compare **incomplete** and **complete metamorphosis** using picture charts of life cycles of insects found in Sabino Canyon. We discuss the advantages of metamorphosis and why this adaptation is an advantage in changing environments.

### Habitat

Compare desert and aquatic habitats and the plants and animals that may inhabit them.

**At this point, Creek and Desert scenes diverge.**

Creek Scene is subject to season, water level in the creek, and temperature conditions. Desert Scene can be done year around but is preferred in the winter.

### CREEK SCENE

### Interdependence

Build a **food chain** using cards of critters commonly found in and along Sabino Creek. Discuss the concepts of consumer, producer, predator, and prey and how the life in the creek and canyon are connected.

### Observe, Describe, and Compare

Hunt for critters in the creek using bowls and nets; then describe and identify them using charts and magnifying cubes, as well as observing the ways they move, get oxygen, and interact with each other. The stage of development is identified, and interesting facts about the critters are shared. All critters are safely returned to the water.

### DESERT SCENE

### Interdependence

Play a card game to discuss the importance of arthropods in our ecosystem and the jobs that insects do for us as pollinators, predators, plant eaters, decomposers, and soil enhancers and how human activity can affect these necessary jobs.

### Observe, Describe, and Compare

Discuss seasonality and the reasons that only evidence of arthropods can be found at certain times of the year. Then we hunt for evidence found in the desert of arthropods

being there even if it is too cold for them to be readily seen. Usually found are egg cases, antlion holes, funnel web spider webs, harvester ant holes, mesquite girdler beetle cuts, and cochineal scale. Results are recorded. Stories about each critter are shared with the students. If insects are easily found and captured they are held in plastic cubes and examined with magnifying glasses. Students are given an opportunity to draw the insect.

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