



Environmental Education Field Study

Invasive Species in the Sonoran Desert Grades 7-12

Description: Invasive Species in the Sonoran Desert

Students receive a general introduction to invasive species. They learn how buffelgrass is a threat to the Sonoran Desert ecosystem. Through hands-on activities students learn how to identify buffelgrass. Students make observations to understand the interrelationships between plants and animals and the environment. Finally they learn about control methods. During a field day experience the students use tools to remove buffelgrass. Presentation focus is easily adapted to the specific needs of each class.

Linked to Arizona Academic Standards: Science S3: C2: G7PO1, G7PO2, G7PO3, G7PO6; G8PO1, G8PO6. S4:C3:HSPO1, C4:HSPO4

Duration: 4 hours –same site for class and removal;
6 hours– different site for class and removal (includes class at school, travel time to removal site, and removal time)

Objectives:

- Students learn the concepts and definitions of invasive and native species.
- Students gain an understanding of the dispersal mechanisms for invasive species and how people play a role in the spread of invasive species.
- Students are able to describe how invasive buffelgrass affects Sonoran Desert habitats and wildlife.
- Students identify buffelgrass and learn removal methods.
- Students receive field work experience through a hands-on participation in buffelgrass removal.

Conceptual Framework:

- All living things are interrelated; they are a product of their environment which includes non-living resources.
- Food webs are pathways through which energy flows from the sun to plants and subsequently to herbivores, omnivores, carnivores and decomposers.
- Species and habitat diversity are the foundation for a stable Sonoran Desert ecological system.

Work Plan Objectives-SDCP elements:

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- **Biological Corridors and Critical Habitat;** in the course of this program we introduce the importance of the biological diversity of the Sonoran Desert and Pima County's role in the conservation of natural and cultural resources.
- **Mountain Parks and Natural;** through this program we emphasize the important and diverse role that Pima County's mountain parks and natural preserves play in the life of the community.

Vocabulary:

Abiotic	Exotic Species	Prevention & Control
Adaptations	Interrelationships Ecosystem	Disturbed areas
Biotic	functions	Competition
Riparian	Invasive	Native
	Natural Controls	Habitat

Equipment and Materials:

Staff materials:

- Power Point "Buffelgrass in the Sonoran Desert"
- GPS unit
- Digital camera
- Data collection form
- Release of liability form
- Photo consent form
- Notebook
- ID materials –laminated photos and ID cards
- digging bars
- gloves
- rock hammer /geology hammer
- plastic bags (55 gal)
- scissor/clippers

- Water jars
- Others (-sunscreen, -sturdy shoes, -hat,-snacks)

Handouts:

- BG – Brochures (English & Spanish)
- BG identification flyer
- Grow Native!
- The Fight to Save Saguaros

Description of Activity:

This activity has two components:

1. Introduction of Invasive Species–Basic Information-Identification
2. Hands-On experience in the field.

Ideally the class should follow this description:

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- Students receive a class (30 minutes -1 hour) with the basic information about invasive species. They can watch the BG video, or a power point presentation. At the end of this section students will be able to understand why we care about this problem in the Sonoran Desert.
- Before start working talk about the safety considerations in the field.
- Through field observations at the school site or in a different location, students learn how to identify buffelgrass. They compare and contrast some of the native grasses with the invasive buffelgrass and fountain grass.
- After observing a demonstration on how to remove buffelgrass, students work in groups of 2-3. Each student will be assigned a role (digger, bagger, and puller), and will rotate during the activity.

If the class has time to or request only the hands-on component, the introduction/basic information and identification of invasive species could be done using examples from the field and the laminate materials.