

# *Bill Williams River National Wildlife Refuge Environmental Education Programs*

## **Create an Animal (Amazingly Astounding & Astonishingly Awesome Animal Adaptations)**

- Students will become aware of the different adaptations that animals have in order to survive in the desert
- Students will create their own animal based on physical and behavioral adaptations

## **The Hidden World of Camouflage**

- Students will learn about the many ways predator and prey animals use camouflage to survive

## **Seed Olympics**

- Students will learn about the journey of a seed, pollination and the lifecycle of plants
- Using a variety of materials, students will develop a seed dispersal device based on the propulsion technique and compete in the “Seed Olympics”

## **Myth Making: The Night Sky and the Secret Lives of Stars**

- Students will learn of the importance of myth, story and legend on other cultures to explain natural phenomena as they develop an understanding of a star’s lifecycle and the stories behind the most well-known constellations
- Students will build their own constellation star hero

## **You Animal: Desert animals and their role in the web of life**

- Students will learn about some of the animals native to the Mohave Desert and the differences between herbivores, carnivores, omnivores and insectivores as well as how to identify them by their teeth
- Students will identify how consumers, producers and decomposers form food chains and webs

## **Going Batty! All about the bats of Arizona and beyond**

- Students will develop an understanding of echolocation, bat physiology, and their contribution to pollination, seed dispersal, pest control and biodiversity
- Common myths will be challenged as bat fact gets distinguished from bat fiction

## **From Trash to Treasure**

- Students will see what effect litter has on wildlife, understand their carbon foot print and the importance of recycling for the environment

## **The Clever, Curious and Crazy World of Birds**

- Students will explore the similarities and differences between birds, mammals, amphibians and reptiles

- Students will learn about the importance of adaptation for diet, habitat and survival.

### **Unwanted Foreign Organisms**

- Students will learn the positive and negative impact of invasive species on biodiversity while exploring the desert communities of Arizona
- Students will be able to distinguish Arizona native organisms from invasive organisms

### **Soil Builders: Discovering the life beneath the surface of our earth**

- Students will become aware of the many factors that contribute to the formation of soils while learning about the rock cycle as it pertains to the desert community

### **What the Clouds Say: Our curious clouds and the stories they tell**

- Students will learn about the various types of clouds, how they are formed and how to identify weather patterns

### **Web of Life**

- Students will become aware of the significance of interrelationships of living things and the importance of biodiversity by constructing a real-life food web
- They will also learn about the significance of keystone species and the difference between extinct, endangered and threatened species

### **Oh Deer: Habitat harmony and the balance of nature**

- Students will identify the four components of habitat and understand their importance on deer as a species
- Students will define the limiting factors on population growth and understand the human impact on loss of habitat as they determine if nature is ever truly in balance through a population game

### **Keep on Trackin'**

- Students will identify, examine, observe and follow animal tracks in the desert

### **Arachnid Assassins and the Wicked Web of Wonder That They Weave**

- Students will distinguish between insects and arachnids while learning about the different spiders of Arizona and the world
- Students will learn about the predatory nature of spiders, importance of silk and their fragile life cycle

### **Desert Explorers**

- Students will sharpen their observation skills as they practice desert plant identification and discover the many different organisms in the desert

### **Desert Artistry**

- Students will develop their observation skills as they become aware of the design elements in nature and how they transfer to human lives