Desert Botanical Garden – Sonoran Desert Adventures Guided Field Trips

### Adventure Guide – Secrets of Desert Plants

**Target Grade(s):** 3rd  
**Time:** 2 Hours

**Theme:** Plants have specialized internal and external structures and can respond to stimuli to increase survival.

| Desired Outcomes:          | 1. Identify the main structures of a plant (root, stem, leaf, flower, fruit).  
                            | 2. Describe the function(s) of each plant structure.  
                            | 3. Identify the adaptations desert plants utilize to survive in the desert.  
                            | 4. Identify some plants and animals that exist in the local environment.  
                            | 5. Identify the Sonoran Desert as the ecosystem in which they live.  
                            | 6. Describe the characteristics of a desert environment. |

**Key Vocabulary:** root, stem, leaf, stomata, photosynthesis, energy, adaptation

**Cross Cutting Concepts:** Energy and Matter, Systems and System Models

**Science and Engineering Practices:** Asking questions and defining problems, developing and using models, constructing explanations, engaging in argument from evidence, obtaining, evaluation and communicating information

**Arizona Science Standards:**

3.L1U.1.5 – Develop and use models to explain that plants and animals have internal and external structures that serve various functions that aid in growth, survival, behavior and reproduction.

3.L2U.1.6 – Plan and carry out investigations to demonstrate ways plants and animals react to stimuli.

3.L2U.1.7 – Develop and use system models to describe the flow of energy from the Sun to and among living organisms.

**Field Trip Activities:**

- Use “roots” to get a “tree” to stand
- Measure out the length of a Saguaro Cactus’ roots
- Touch and feel the stem of a cactus and a mesquite tree to compare
- Model the inside parts and functions of a stem
- Collect data on leaf size, color and texture