

# EXPLORER'S GUIDE

## FOR A SELF-GUIDED VISIT

Welcome to the Arizona-Sonora Desert Museum!

**Instructions:** Review the questions in this guide **before** you visit the Desert Museum. You should be able to find all the answers as you tour the Desert Museum if you carefully **observe** animals, plants, and geologic features both inside and outside exhibits, and **read** signs and labels. Docent interpreters are available near many exhibits. They are wearing uniforms and may be available to answer questions about exhibits. **Good luck and enjoy your visit!**

### PART 1: ZOOLOGY

**CANINES:** There are 4 members of the canine (dog) family at the Desert Museum. Find each and list it on the chart below. Describe the habitat of each animal. Remember: habitat is an animal's living space and includes food, water and shelter.

Animal's Name	Habitat (including food)

1. What do these canines have in common?

2. How are they different?

## ANIMAL ADAPTATIONS

Complete the chart as you locate and carefully observe each animal listed below. Describe at least 2 adaptations each displays and tell how each adaptation helps the animal survive in its environment. Think about which adaptations are physical, physiological or behavioral.

Students: Observe animals, as all information is not on the signs. Specific animal locations noted under name.

<b>Animal</b>	<b>Adaptations</b>
Desert tortoise (near large aviary)	
Javelina (desert loop trail)	
Tarantula (reptile, invertebrate and amphibian room)	
Otter (Riparian corridor) 	
Elf owl (life on the rocks)	
Sonoran Desert Toad (reptile, invertebrate and amphibian room)	
Millipede (life underground) 	

## ANIMAL BEHAVIOR

Find an example of an animal in each category listed below. Carefully observe each animal for at least 4 minutes. Write the name of each animal under the appropriate heading and describe the behaviors you observe. Add a diagram!

Arthropod Name:	Answers will vary:
Reptile Name:	Answers will vary:
Mammal Name:	Answers will vary:
Amphibian Name:	Answers will vary:
Bird Name:	Answers will vary:
Fish Name:	Answers will vary:

## **PART 2: EXHIBIT-SPECIFIC QUESTIONS**

### **CONVERGENT EVOLUTION GARDEN**

- 1. Take a good look at these plants from different deserts around the world. What adaptations to desert environments do they have in common.**
  
- 2. What does convergent evolution mean?**

### **EARTH SCIENCES CAVE**

#### **In The Wet Cave**

- 1. Name 4 wet cave users or dwellers.**
  
- 2. Describe the formation of a limestone cavern. Use diagrams too!**

#### **In The Dry Cave**

- 1. Describe the environment of this region about 300 million years ago. What evidence exists to support your answer?**
  
- 2. Find the packrat middens. What are they and how are they helpful to scientists?**

**3. a. Locate and describe the hidden Hohokam cave site.**

**b. Who were the Hohokam?**

### **EARTH HISTORY ROOM**

**Locate and describe the oldest thing found on earth in this exhibit.**

### **ANCIENT ARIZONA**

**Describe the environment of this region, including the plants and animals, about 12,000 years ago.**

### **MOUNTAIN WOODLAND**

**1. What is meant by the term ‘mountain island’?**

**2. How is the mountain woodland climate different from that of the desert?**

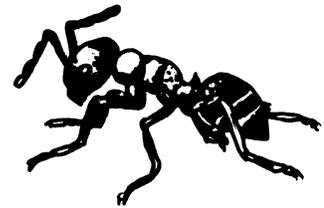
**3. Carefully observe the plants in this mountain area. How is this vegetation different from desert vegetation?**

**4. a. Look for the Mexican gray wolf. For what reasons is the Mexican gray wolf near extinction today?**

**b. Can any be found in the wild in Southern Arizona today?**

## DESERT GRASSLANDS

- 1 a. How does a harvester ant notify others in its colony if it locates seeds?
  - b. Why should you watch out for these ants?
2. List the 4 traits of a grasshopper mouse that are unexpected in a small rodent.
3. How many grasshopper species can be found in Arizona? Name 3 species.



3. Look at the SOIL IS ALIVE exhibit.
  - a. Why are decomposers important?
  - b. Name 4 decomposers and describe how each is at work in the soil.
4. Why can grasses survive fires?
5. How is the burrowing owl different from other owls?
6. What is a cienega and why is it important?

## **MAMMOTH KILL SITE**

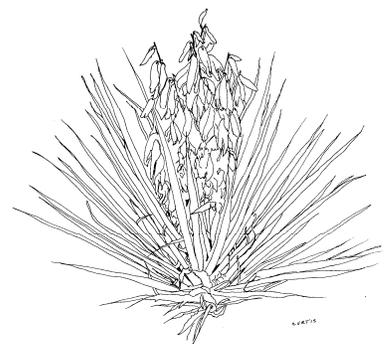
1. List any evidence of man that you see at this site.
2. a. What evidence of megafauna is found at this site?  
  
b. List some examples of megafauna that used to live in Arizona.
3. How long ago did these people and megafauna live in Arizona?

## **DESERT LOOP TRAIL**

1. Look at the different shade ramadas (structures.) What desert materials are used by the Tohono O'odham to build them?
2. a. Find the coyotes and javelina in their exhibits. Where are they and what are they doing?  
  
b. See how many questions you can answer on the flip-up signs at both exhibits.

## **HOHOKAM AGAVE FIELD**

1. The Hohokam living nearly 1,500 years ago cultivated agave. Look at this exhibit and describe their agave farming techniques.
2. How did the Hohokam use agave?



## LIFE ON THE ROCKS

1. What are some reasons animals live in/on/under/around rocks?
2. How are crystal vein deposits formed?
3. What is the worlds smallest owl and what does it eat?

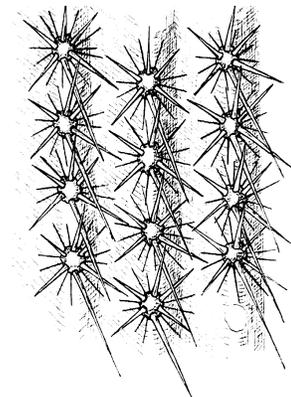
## CAT CANYON

1. a. Write the name of the cat in this exhibit that is Endangered.  
b. Why do you think some of these animals are in trouble?



## CACTUS GARDEN

1. List and describe 4 adaptations cacti have to survive and thrive in the desert.
2. Prickly pear and cholla are different species of cacti within the Opuntia genus. Carefully observe both of these cacti.
  - a. What do they have in common?
  - b. How are they different?



## RIPARIAN CORRIDOR

1. Observe the aquatic arthropod tank near the top of the stairs. List any organisms you find.
  
2. Describe some ways aquatic insects breathe, catch food, and hide. (Use specific aquatic insects as examples.)

Behavior	Insect name and description of behavior
Breathe	
Catch food	
Hide	

3. What are riparian corridors and why are they important?
  
  
  
  
  
  
  
  
  
  
4. Diagram and label a cross-section of a typical riparian corridor (see wall near underwater viewing area).
  
  
  
  
  
  
  
  
  
  
5. a. How have riparian corridors been affected by humans? Note: See photos near otter exhibit.

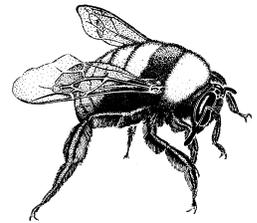
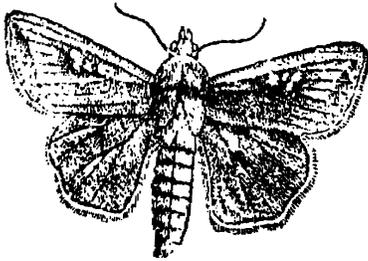
6. a. Where is this subspecies of desert pupfish found?

b. Describe the special physiological adaptations it has evolved for survival in desert pools.

### LIFE UNDERGROUND

1. Explain 2 advantages to spending hot summer days in underground burrows or crevices.

2. Name 4 animals that burrow.



### POLLINATION GARDENS

1. Describe 2 physical and 2 behavioral differences between moths and butterflies.

MOTH	BUTTERFLY

2. Pollination is the process by which pollen is transferred from the male part to the female part of a flower of the same species. Plants need to be pollinated in order to produce seeds. List three ways plants attract pollinators.

3. Are pollinators important to people? Explain. (Hint: think about the food we eat.)

4. Watch at least 2 pollinators in the gardens for about 3 minutes. Describe what you observe.

### **WARDEN AQUARIUM: RIVERS TO THE SEA**

1. What is “Bycatch”?

2. Describe the diversity of the Sea of Cortez.

3. Read the digital information about the Colorado River and the Colorado River Delta. List at least three ecological issues facing these habitats.

### **TONIGHT**

1. Write a paragraph about something new you learned and found particularly interesting on your trip.

2. Describe some things you learned from a docent interpretation

