

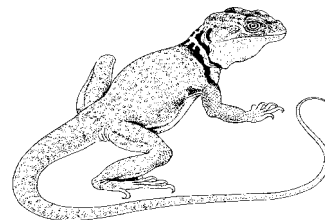
PART II: EXHIBIT SPECIFIC QUESTIONS

ORIENTATION RAMADA

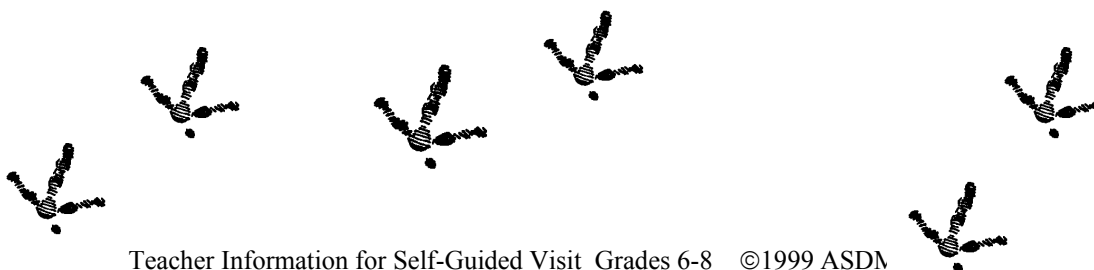
- 1) How many seasons are in the Sonoran Desert? Five List them.
Spring, Dry Summer, Summer Monsoon, Fall, Winter
- 2) How many square miles does the Sonoran Desert cover?
100,000 square miles
- 3) In which 2 countries is the Sonoran Desert found?
U.S. and Mexico

REPTILES AND INVERTEBRATES

Herpetology staff (people who care for, and study reptiles and amphibians) have tried to create an exhibit that looks similar to the habitat that reptiles inhabit in the wild.



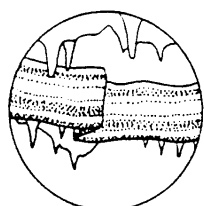
- 1) Find the San Esteban chuckwalla. Describe 2 features that help it blend in with its environment.
Sits very still / same coloration as the rock
- 2) Find the speckled rattlesnake. Is it easy to locate in its exhibit? _____ Describe 2 features that help it blend in with its environment.
Sits very still / same coloration as its surrounding environment
- 3) Believe it or not, the only 2 venomous lizards in the world are found in the Sonoran Desert! Find the 2 lizards and write their names.
Gila monster / Mexican beaded lizard
- 4) Although most reptiles are egg layers there are exceptions. Name a snake that gives birth to live young.
Rattlesnakes / garter snakes / and boas



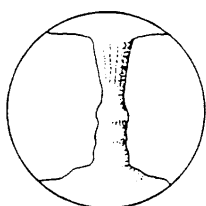
EARTH SCIENCES CAVE

Wet Cave

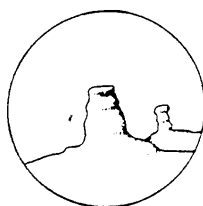
- 1) How is a limestone cave formed? (Hint: think wet)
Some caves, such as this one represents, form when soluble rocks come in contact with weak, natural, acid-bearing ground water. The acidic water slowly dissolves rock eventually forming many large and small caverns. This wet cave is still growing because acidic water continues to dissolve the limestone rock.
- 2) How many different kinds of cave decorations can you find? Put a check through those that you see. *Answers will vary.*



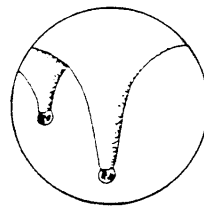
BACON



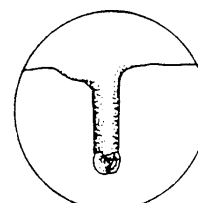
COLUMN



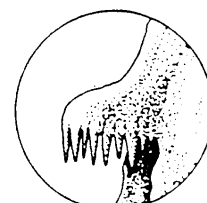
STALAGMITE



STALACTITE



SODA STRAW



CANOPY

Dry Cave

- 1) Locate the *Fossiliferous Limestone* display. How is it possible that we have fossilized seashells and limestone caves in the Sonoran Desert?
300 million years ago the Sonoran Desert was covered by sea.
- 2) Locate the Hohokam site. Who were the Hohokam?
The Hohokam were some of the earliest human inhabitants of the areas around present day Tucson and Phoenix. They irrigated and farmed near rivers and streams for more than 700 years until about the year 1400.
- 3) In what way do you think this site was used by the Hohokam?
Answers will vary.
- 4) List 4 animals that make their homes in wet and dry caves.
Bats, ring tails, barn owls, pack rats, salamanders, spiders, cave crickets and beetles. Temporary visitors include rattlesnakes, porcupines, desert tortoises, and scorpions. Prehistoric inhabitants include the giant sloth.

Mineral Gallery

- 1) Find a mineral that matches shades of the rainbow: (several answers are possible)
Red: *vanadinite garnet* Orange: *wulfenite, vanadinite* Yellow: *gold, sulfur*
Green: *diopase, malachite* Blue: *kinoite, azurite* Violet: *azurite, amethyst*

MOUNTAIN WOODLAND

Mountain Lion

- 1a) What are the mountain lions doing?
Sleeping / lying down quietly / walking



Fig. 8

- b) Would the mountain lions be doing this in nature? Explain.
Yes. Mountain lions, for the most part, hunt at dawn and dusk (crepuscular) so during they day they are usually resting to save energy.

- 2a) The mountain lion is a predator. What is a predator?
A predator is any organism that must eat another organism for food.

- b) What adaptations does it have to be a successful predator?
Sharp, retractable claw / canine teeth for gripping prey / excellent vision / hearing

- 3) Name 3 animals that a mountain lion would prey upon.
Deer, bighorn sheep, javelina, turkey, rabbits and squirrels

Mexican Gray Wolf

Wolves have ranks in their society just like humans. The animal with the highest position in the pack is the dominant animal. All members of the pack below the dominant female and male are submissive to them. The lowest ranking member of the pack is the most submissive.

- 1) Spend a few minutes observing the wolves. Pay special attention to the tails and ears. Match the body language of the wolves to those in the illustrations.

Circle each illustration you see displayed by the wolves.

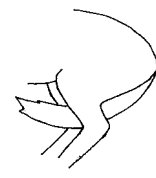
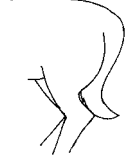
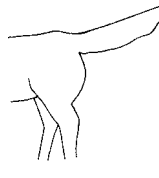
Dominance

Aggression

Relaxed

Submission

Fear





DESERT GRASSLAND

1) Grasses can survive fire, freezing temperatures, drought, wind, heat, grazing and trampling. How are they able to do this?

Most grasses have their growing tissue located underground or at the surface, so what we see above ground is just their leaves. When a fire rages over a grassland, the flames burn away only the leaves without damaging the main part of the plant lying at or below the soil surface. After the fire has passed, the charred landscape will again become green with new grass leaves.

2) Find and name the Endangered grassland rattlesnake.

Massasauga

3a) Prairie dogs used to be found in very large "towns". What is an advantage to living in a large group?

Many individuals mean many eyes watching for predators. Individuals do not have to spend a lot of time looking out for predators.

b) What is a disadvantage to living in a large group?

Diseases can spread quickly in crowded conditions and large aggregations of animals tend to attract predators.

4) What are the prairie dogs doing? Check off the behaviors that you observe.

Eating

Sunning

Playing

Grooming

Predator alert

Other: _____

Mammoth Kill Site

1a) Feel the teeth of the mammoth (oval shapes below sign). Describe the texture.

The teeth feel flat and lumpy not sharp.

b) What do you suppose mammoths ate?

Grass

c) How did these teeth assist the animal in eating? HINT: Think about your own molar for comparison.

Ridges for grinding tough grass

DESERT LOOP TRAIL

Javelina

1a) Stop at the flip-up signs along the trail by the javelina exhibit and try to answer the questions. How many did you get correct? _____

b) Name an interesting fact that you learned.

Answers will vary.

2) Why do you think people often mistake javelinas for pigs?

Answers will vary but may include: both have hooves, have similar snout

3) List 3 differences between javelina and pigs.

Javelinas

Originated in the Western Hemisphere

Scent gland near base of tail

Have a tiny tail

Pigs

Originated in the Eastern Hemisphere

No scent gland

Usually have a long tail

4) Scan the habitat for javelinas. What are they doing? Why do you think they are doing this?

Answers will vary. Perhaps they are resting in the shade, walking on a "trail", wallowing, rubbing scent glands, vocalizing or eating.

Agave

1) Find the Hohokam agave fields. How does the Hohokam method of agave farming differ with commercial farming of today?

Unless you look carefully you probably wouldn't realize this area is a "farm". Hohokam farming had a minimal impact on the landscape compared with today's farming. For example, the agave farms did not rely on irrigation, and other species of plants were not cleared away.

Coyotes

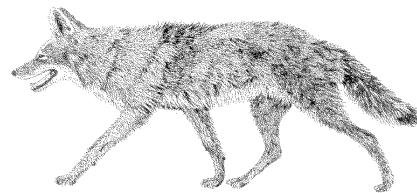
1) List 3 adaptations that allow the coyote to be a successful predator.

Color – blends into its habitat so it can sneak up on potential prey animals

Long nose – good sense of smell for finding food and detecting other coyotes or animals that may eat it

Eyes in the front of face – enables the coyote to have good binocular vision. Binocular vision allows it to judge distances accurately.

Long legs – good for traveling long distances for long periods of time in search of food



2) Coyotes are able to thrive in many different habitats. Why?

Coyotes seem to be able to live anywhere because they eat almost anything, and reproduce under almost any circumstance. They not only thrive in areas completely transformed by man, but at the same time, have expanded their range and are now found throughout the United States.

RIPARIAN CORRIDOR

- 1) What is a "riparian area"?
An area along the banks of rivers, streams, ponds and lakes that supports particular plants and animals that require a lot of water.
- 2) If you were flying in an airplane, how would you recognize a riparian area?
A riparian area looks like a ribbon of green from the air because the water-loving vegetation offers a stark contrast to the surrounding desert vegetation.
- 3) List 3 ways riparian areas are different from the surrounding desert.
Larger and more dense vegetation/ more organic material on the ground/ much more shade



Beaver/Otter Exhibit

- 1) Observe the beaver and otter. List 3 adaptations each of them has for swimming:

Beaver

Flat tail – possibly used to steer

Soft, dense fur – repels water

Webbed hind feet – propel through water

Eyes on top of head – watch for predators while swims

River Otter

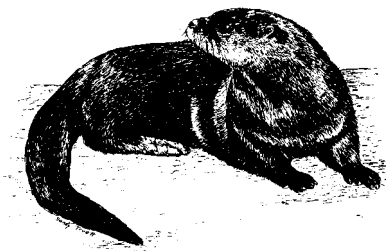
Webbed feet – for swimming

Oily fur – repels water

Long, thin body – streamlined

Long tail – rudder for steering

- 2) Why are fish found in the beaver exhibit but not the otter exhibit?
Because the otter eats fish and the beaver does not.
- 3) Find and list 3 species of fish native to the Sonoran Desert Region.
Desert pupfish / Sonoran chub / Gila topminnow / beautiful shiner
- 4) Why do you think these fish are now Threatened and Endangered?
Loss of habitat. Over 90% of riparian areas in the Sonoran Desert have been altered due to over consumption of our groundwater or destroyed due to development.



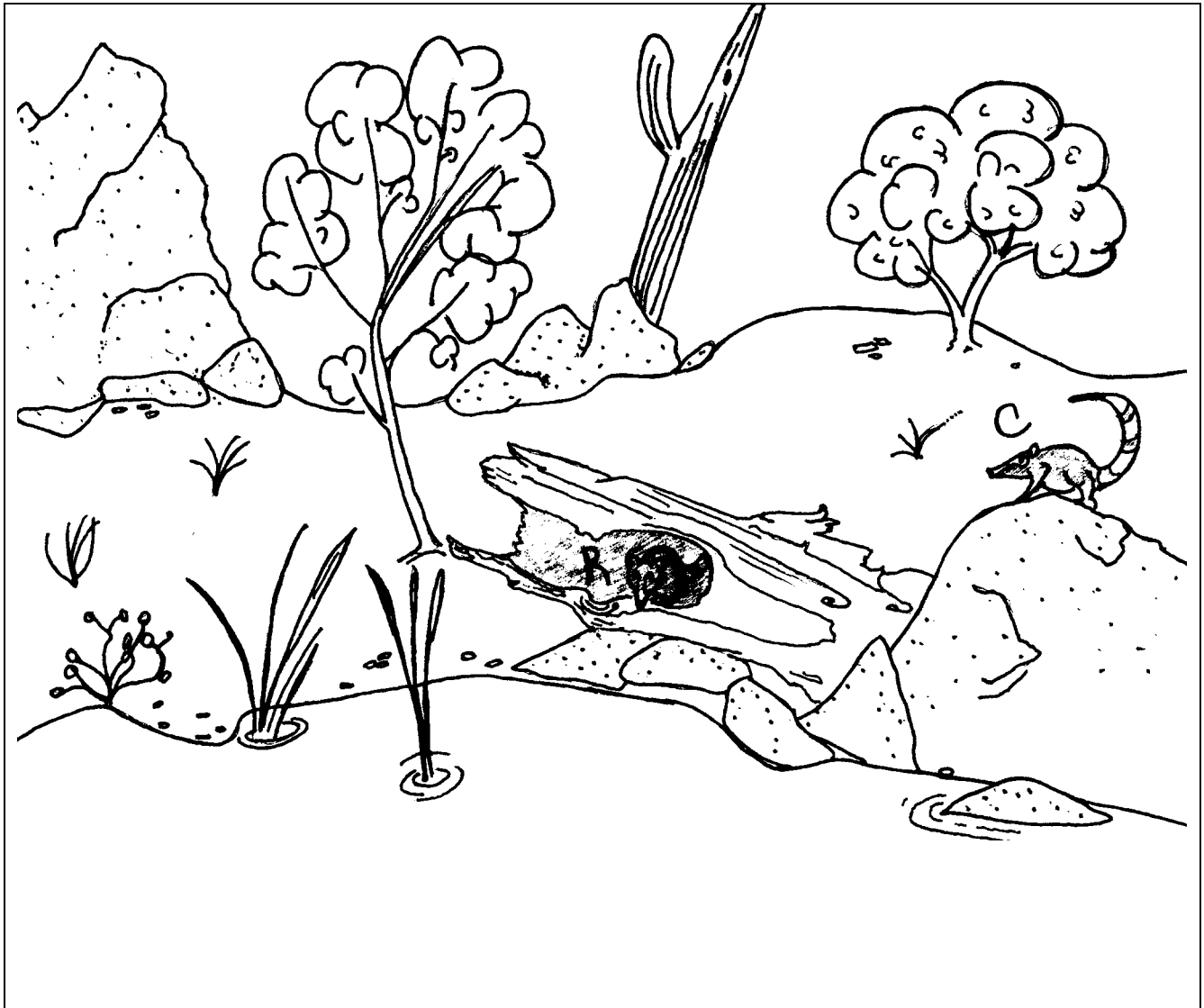
Coati Exhibit

Male coatis are solitary except for mating. The females and young live together in bands of 4 - 20.

- 1) Spend a few minutes watching the behaviors of the coatis.
Create a map of the exhibit and label the coatis on the map.
Use the key to indicate the behaviors you see.



D = digging E = eating R = resting S = sniffing G = grooming P = playing C = climbing



- 2) Coatis are very interesting looking animals. Observe their body and list some adaptations that they have for hunting and feeding.
Long, mobile snout – they can smell items up to 2 feet under the soil / strong, curved claws for digging / long tail used as a balance when climbing, and as a communication signal / White eye rings used in visual communication

3) How do coatis obtain food?

They dig through leaf litter, using strong claws and a long sensitive nose to locate something edible.

4) What do they eat?

Coatis are omnivores which means they are both meat and vegetable eaters like humans. Coatis are searching for things such as insects and their larvae, bird and reptile eggs and young, nuts and fruit.

POLLINATION GARDENS

1) Make a stop in the pollination garden. Circle the different types of pollinators that you see:

Bee

Moth

Fly

Wasp

Butterfly

Hummingbird

Other: Answers will vary depending upon the season and time of day.

2) Observe 2 pollinators for five minutes and describe their movement and behavior.

Pollinator's name:

Description:

Pollinator's name:

Description:

