

DISCOVERY SAFARI

A Self-Guided Tour of the International Wildlife Museum
Grades K-2

Educators

This educator's guide provides you and your chaperones with inquiry-based questions to stimulate discussion among your students as you travel through the museum. These cross-curricular questions are based on the Arizona Academic Standards found on page 2 of this guide.

Preparing for your Safari

This packet may be used on its own or to supplement the student discovery packet.

1. **Give** a copy of this guide to each chaperone.
2. **Give** a copy of the Chaperone Guidelines to each chaperone.
3. **Assign** each chaperone to no more than 10 students. Using the questions in the educator's guide, the chaperones will be able to enhance the students' museum experience while assisting them in completing their Discovery Safari Field Guide.
4. **Arrange a time** when the chaperones will meet you as a class after completing the self-guided Discovery Safari tour. A tour through the museum takes a minimum of one hour.



Arizona Academic Standards

Science	KINDERGARTEN	GRADE 1	GRADE 2
	SC00-S1C1-01, 02	SC01-S1C1-01, 02	SC02-S1C1-01
	SC00-S1C2-01, 02	SC01-S1C2-01, 02, 04	SC02-S1C2-01, 02
	SC00-S1C3-01, 02	SC01-S1C3-01	SC02-S1C2-04
	SC00-S1C4-01	SC01-S2C1-02	SC02-S1C3-01, 02, 04
	SC00-S2C1-02	SC01-S4C1-01, 02, 03	SC02-S2C1-01
	SC00-S4C1-01, 03	SC01-S4C3-01, 02, 03	SC02-S4C1-01
	SC00-S4C3-01, 02	SC01-S5C1-01	
	SC00-S5C1-01, 02	SC01-S6C1-04, 05	
	SC00-S5C1-02		

Language Arts	R00-S1C3-01, 03	R01-S1C3-01, 02, 03, 04, 05, 06, 07	R02-S1C3-01, 02, 03, 04, 05, 06, 07, 08, 09
	R00-S1C4-01, 03	R01-S1C4-01, 03, 04	R02-S1C4-01, 02, 03, 04, 05, 06, 07
	R00-S3C1-03	R01-S1C5-02	R02-S1C5-02, 03
	R00-S3C2-02	R01-S3C1-02, 03	R02-S1C6-03
	W00-S2C1-01, 02, 03	R01-S3C2-01	R02-S3C1-02, 03, 05
	W00-S2C4-01, 02	W01-S2C1-02	R02-S3C2-01
	W00-S2C6-01, 02, 03, 04, 05, 07, 08, 09	W01-S2C4-01, 02	W02-S2C4-01, 02
	W00-S3C1-02	W01-S2C6-01, 02, 04, 05, 06, 07, 09, 10	W02-S2C6-01, 06, 07, 08, 09, 10, 12
	W00-S3C2-01	W01-S3C1-02	W02-S3C1-02
	W00-S3C6-01	W01-S3C2-01, 02	W02-S3C2-01, 02
	LS-R2, R3, R4, R5	W01-S3C6-01	W02-S3C6-01
	VP-R1	LS-F1	LS-F1
		VP-F3, F4	VP-F3, F4

Social Studies	SS00-S2C2-01	SS01-S3C1-01	SS02-S4C2-03
	SS00-S3C1-01	SS01-S4C2-02	SS02-S4C5-01, 02
	SS00-S4C3	SS01-S4C3	
	SS00-S4C5-01, 02	SS01-S4C5-01, 02	

Visual Arts	S1C1-001, 101, 102
	S1C2-001, 002, 101, 102
	S1C3-001, 101
	S1C4-001, 101
	S1C5-001, 101, 102

Discovery Safari Educator's Guide

BACKGROUND INFORMATION

The International Wildlife Museum is a natural history museum. We do not condone the collecting of specimens specifically for display. Many of the animal specimens are from a 100-year-old collection on loan from the state of Arizona. Others have been donated by government agencies, wildlife rehabilitation centers, captive breeding farms, other museums, zoos, and hunters. There are also some replicas.

Are the animals in the museum real? Most of them. The arthropods are carefully pinned to boards so their fragile wings and bodies are not damaged. Taxidermists make the other animals look life-like. They use actual animal skins, but artificial bodies, teeth, and eyes. Some taxidermy mounts are completely formed from man-made materials. Exhibit staff create dioramas of their habitats to give you a sense of the animals as they are in the wild.

Q: Are the animals in this museum alive? How do you know?

A: No; they are not moving, breathing, eating.



Insects of the World

Insects live on every continent and are the most numerous animals. For every human, there are 200 million insects living on the planet.

Q: Pick an insect in this room. How does it keep from being eaten by predators?

A: Possible answers include: camouflage, spines, stingers with venom, poisonous, bad tasting.



Mammals

A lot can be learned about an animal by studying its bones and teeth, such as its food habits and age. This touch area allows you to more closely investigate skulls, horns, antlers, and fur.

Q: What does a carnivore eat? Herbivore? Omnivore?

A: Carnivores eat other animals. Herbivores eat plants. Omnivores eat both animals and plants.



Birds

Birds have many unique characteristics. If you compare the ostrich to the toucan, you will notice many differences, but also many similarities.

Q: What are some adaptations of birds?

A: Possible answers include: hollow bones, feathers, specialized beaks and feet, wings, large eyes, lay eggs, most can fly, females are usually more camouflaged than males.



Predator & Prey

Predators, such as mountain lions and wolves, eat other animals. **Prey** animals, including pronghorn antelope, quail, and jack rabbits, are eaten by other animals.



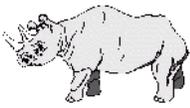
Q: What are some characteristics of a good predator?

- Sharp claws and teeth
- Eyes facing forward allow them to judge depth and distance.
- Most cats are capable of short bursts of extreme speed, and have furry paws and retractable claws for sneaking up on their prey before attacking.
- Members of the dog family have an excellent sense of smell, can run for long distances without tiring, and often hunt in packs.

Q: How do prey animals avoid being eaten by a predator?

- Eyes on the side of the head in order to see all around them.
- Large ears to increase their ability to hear an approaching predator.
- Horns or antlers to defend themselves.
- Hooves or large hind feet for faster running ability and defense.

Conservation



Rhinoceros are one of the many species that need help to survive, due to habitat loss and poaching. There are 2 rhino species in Africa (White, Black) and 3 in Asia (India, Java, Sumatra). The southern population of white rhinos is the only population that is not endangered.

Q: What is poaching?

A: Poaching is the illegal taking of fish or game.

Q: Why are rhinoceros poached?

A: Rhinos are illegally hunted for their horns, which are made of compressed and hardened hair growing from the skin of the snout. The horns are used as ceremonial dagger handles in Yemen and ground up for use in traditional "medicine" in the Orient.



McElroy Hall

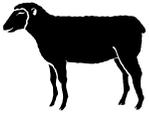
This room contains mammals from Africa, Europe, Asia and North America. Many of these mammals have horns or antlers. Antelope have horns and live in Africa. Deer live in North America & Eurasia and have antlers.

Q: What is a horn?

A: A horn is made up of a protein substance similar to your hair and fingernails called keratin. It covers a bone on the animal's skull, is used for defense, grows in one direction, is permanent, and is found on both males and females.

Q: What is an antler?

A: Antlers are made up of bone. They are used for defense, have many points (forks or tines), are shed and re-grown every year, and are found only on males (except in caribou, also known as reindeer, where the males and females both have antlers).



Sheep & Goat Mountain

Here is a 32-foot high mountain featuring goats and sheep from around the world. You can tell the difference between the two by looking at their horns. Sheep horns curl in a spiral as they grow and goat horns grow straight back, though they may twist some.

Q: What animal in this room did you like the best? (Answers will vary) What is one fact you learned about this animal? (Country of origin, diet, habitat, interesting fact)



Nocturnal Creatures

Arizona's state mammal, the Ring Tail, is just one of the many nocturnal animals of the Sonoran Desert. Usually, humans do not get to observe animals as they search for food and water and go about their nightly business.

Q: What is the main reason animals in Arizona are nocturnal (active at night)?

A: To avoid the heat.



Bringing Back Wildlife

Arizona is home to numerous species of animals, many of which can only live in certain habitats. Unfortunately for the animals, people also enjoy living in these beautiful places. Habitat loss puts a strain on the animal populations, causing some to become endangered.

Q: What does the word endangered mean?

A: Endangered means in danger of not existing anymore.

Q: Name some endangered Arizona plants or animals.

A: Answers will vary, but may include lesser long-nosed bat, Gila topminnow, masked bobwhite, black-footed ferret, jaguar, ocelot, Sonoran pronghorn, and cactus ferruginous Pygmy-owl.

Q: What happens if an animal is endangered and people do nothing?

A: They could become extinct.



Prehistoric Mammals

The *Woolly Mammoth* and the *Giant Irish Elk* are two mammals that became extinct 10,000 to 11,000 years ago. They existed during a period called the Age of Mammals or Cenozoic.

Q: Why do you think the Woolly Mammoth was so hairy?

A: The earth's climate was cold.

Q: What kind of food did the Woolly Mammoth eat?

A: Plants, especially grasses.

OPTIONAL POST-VISIT ACTIVITIES

1. **World Safari in a Book** – Learn more about different animals and create your own book

Materials: markers, crayons, colored pencils, large sheets of construction paper, pencil & paper

Procedure: Have each student select an animal from the museum and conduct research to learn more about it, such as its diet, type of habitat, geographical location, predators, etc. Then, have each student draw, or otherwise create, a picture of their animal. Assemble each student's work into a class picture book. Or, compile the animals into several books by habitat, geography, or other similar characteristics.

Sharing/Grading: The finished product will be presented to the rest of the class. The students will be graded on their effort, presentation, satisfactory completion of each part of the procedure, and accuracy of the information regarding their particular animal. The books may also be shown/read to a younger classroom of students.



2. **Create Your Own Critter** – Design your own made-up, but well adapted animal

Materials: markers, crayons, colored pencils, large sheets of butcher paper, pencil & paper

Procedure: Before drawing their animal, the students need to answer and record their responses to the following questions: Where will it live? What will it eat? How does it move? Based on the answers to these questions, the group will decide and record which adaptations are necessary for their animal to survive. Then, they will draw their made-up animal on the butcher paper, using the provided materials. Finally, the students will write a short report including the name of the animal, its habitat, and its lifestyle. They should also include the list of adaptations, reasons for each adaptation, and the advantages provided by the adaptations.

Sharing/Grading: The finished product will be presented to the rest of the class. The students will be graded on their effort, presentation, satisfactory completion of each part of the procedure, and clarity and thoroughness of the report.



3. **Bug Boogie** – Write your own song or rap about your favorite insect or spider

Materials: *Insectlopedia* by Douglas Florian, pencil & paper, photographs, books, & information fact sheets about various insects and spiders

Procedure: Read several poems from the book. In small groups, pairs, or individually, have students choose their favorite insect or spider. Next, they will decide and record what adaptations their insect/spider has to help it survive. Then, they will write a rap or song about their insect/spider, comprised of four verses or stanzas. Included in the rap/song should be the adaptations and how they help the insect/spider to survive.

Sharing/Grading: The rap/song should be presented to the rest of the class. The students are graded on their effort, presentation, satisfactory completion of each part of the procedure, and accuracy of the adaptations mentioned for their particular insect or spider.



SELF-GUIDED VISIT EVALUATION

Date of Tour _____

School (optional) _____

1. How did you learn about the International Wildlife Museum?
Friend/Relative Newspaper Previous Visit Driving by Mailing Other _____
2. Did you have any problems scheduling a tour? YES NO
If YES, please explain. _____

3. Did you have any problems with admissions? YES NO
If YES, please explain. _____

4. Did you use the pre-visit information? YES NO
If YES, what was most useful? _____

5. Was it helpful to have the Arizona Academic Standards? YES NO
6. Did the chaperones use the Discovery Safari packets? YES NO
7. Did your group order food from the restaurant? YES NO
If YES, did any problems occur? _____

8. Were the movie selections appropriate for your students? YES NO
9. How would you rate your field trip to the International Wildlife Museum?
POOR OKAY GOOD GREAT
10. Would you consider scheduling another self-guided museum visit using the Discovery Safari packet? YES NO
11. What would have made your visit more educational or enjoyable?

12. Please add any specific suggestions regarding the Discovery Safari materials.

Thank you for helping us make the museum a better place. Please turn this form in to the Ticket Window or mail to: **International Wildlife Museum, ATTN: Education Department, 4800 W. Gates Pass Rd., Tucson, AZ 85745**