

HIGH DESERT MUSEUM

WILDLIFE *and* LIVING HISTORY

SELF-GUIDED LEARNING EXPEDITION



LIFE SCIENCE

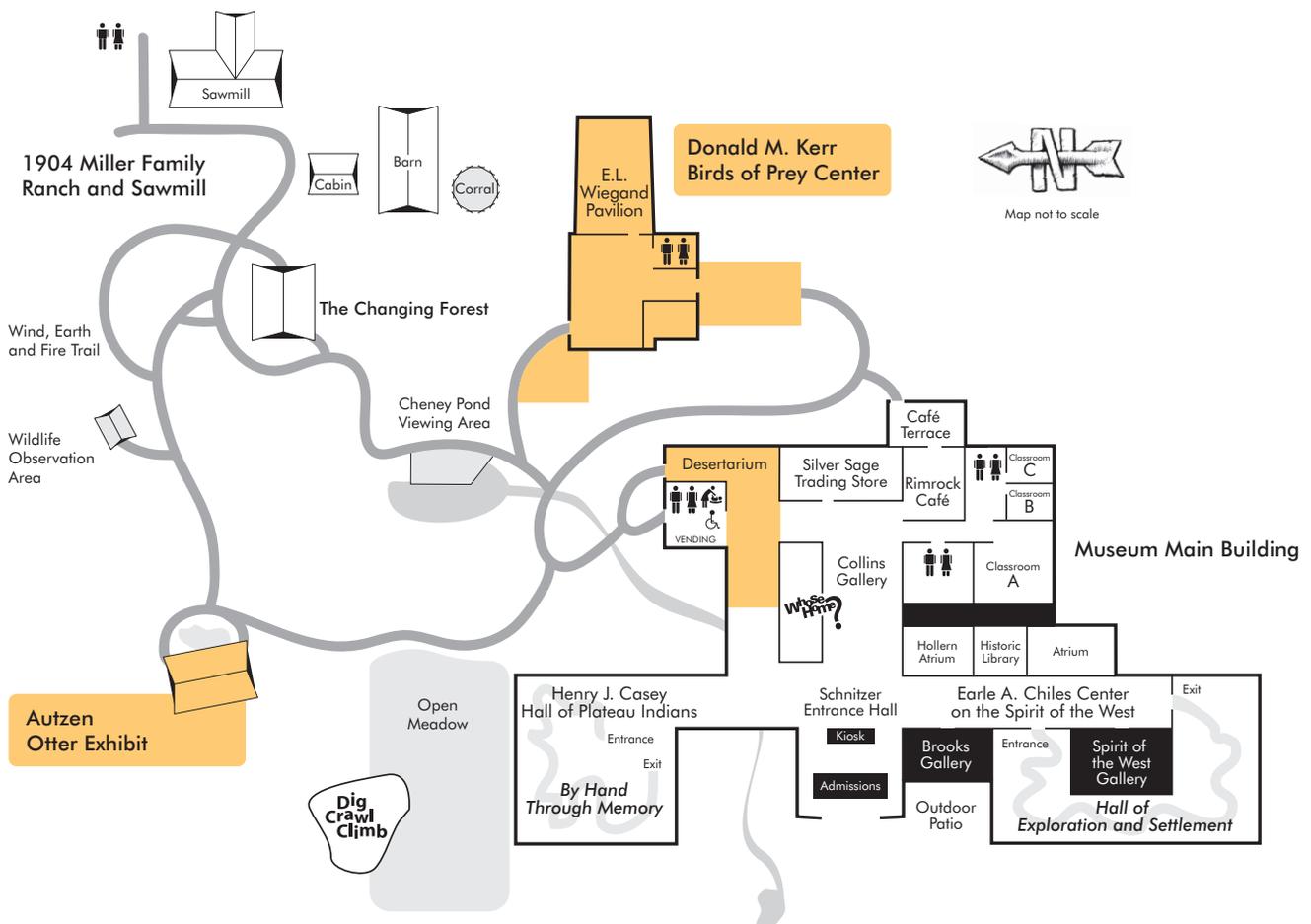
Name _____

GRADE LEVEL: 2–3
TEACHER GUIDE

LIFE SCIENCE | Survival Adaptations

On this expedition, you will visit the following areas in order to complete activities related to the theme “Survival Adaptations.”

EXHIBIT TITLE	Check (✓) when complete
Desertarium.....	<input type="checkbox"/>
Donald M. Kerr Birds of Prey Center.....	<input type="checkbox"/>
Autzen Otter Exhibit.....	<input type="checkbox"/>
Scavenger Hunt throughout the Museum.....	<input type="checkbox"/>



Connection to Standards
Next Generation Science Standards
 Disciplinary Core Ideas
 • LS3.B: Variation of Traits
 • LS4.D: Biodiversity and Humans

DESERTARIUM | Survival in the High Desert

REPTILES VERSUS AMPHIBIANS



- Reptiles are cold-blooded animals that have scales and breathe with lungs. Most reptiles live on land and lay eggs.
- Amphibians live on both land and water, using both gills and lungs throughout their lives. They do not have scales and their skin is smooth. Most amphibians go through metamorphosis.



Can you find three different reptiles?

1. **possible answers include any** _____
2. **snake, lizard, tortoise or turtle** _____
3. _____

Can you find two amphibians?

1. **possible answers include any** _____
2. **frog, salamander or toad** _____

WATER HABITAT

Find two animals that live in water.

1. **fish, turtle, toad, frog, salamander** _____
2. _____

- An adaptation is a body part or behavior that helps an animal survive in its environment.

What adaptation helps animals move in water? **fins and/or webbed feet**

How does that feature help the animal move? **answers will vary**

What adaptation, or body part, helps animals breathe underwater? **gills**

How does that feature help the animal breathe? **answers will vary**

DESERTARIUM & OUTDOOR EXHIBITS

BUILT FOR SURVIVAL

Organisms vary in how they look and function because they have inherited traits, which are specific for certain environments, from their parents. As you visit the animal exhibits throughout the Museum, look for animals that have the characteristics in the chart below.

Fill in the name of the animals you find with these characteristics:

WINGS

1. **Burrowing owl**
2. **Great horned owl**
3. **Bald eagle**

SCALES

1. **Gila monster**
2. **Western fence lizard**
3. **Redband trout**

FUR

1. **Porcupine**
2. **Bobcat**
3. **Otter**

WORD BANK

camouflage

fly

desert tortoise

protect

dig

STRUCTURE TO FUNCTION

Fill in the blanks and finish the following sentences:

1. A burrowing owl's wings can help it **fly**.
2. A **desert tortoise** can use its claws to **dig**.
3. A bobcat has spotted fur to help **camouflage** itself and protect it from being seen by a predator.
4. A collared lizard's scales can help **protect** its body in a dry and rocky habitat.

DONALD M. KERR BIRDS OF PREY CENTER

RAPTOR ADAPTATIONS

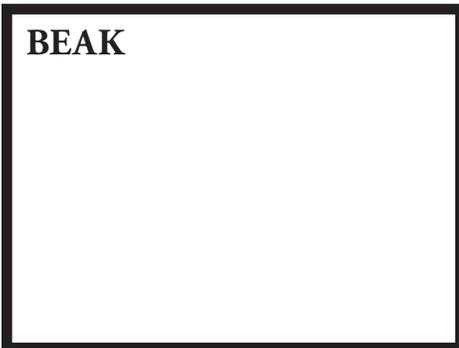
Explore the birds on display in this exhibit and read the exhibit panels.

1. Choose one bird. **answers will vary**

Species name?

2. Draw the bird's...

BEAK



3. How does this beak help the bird eat?

A hooked beak helps the bird rip apart its prey.

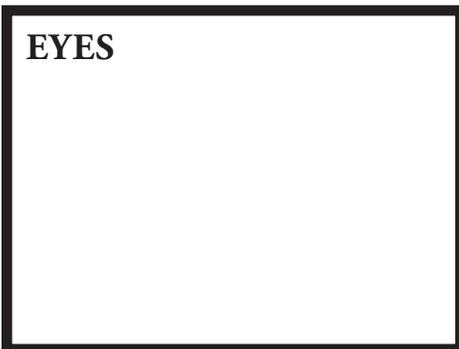
FEET



4. How do these feet help the bird catch prey?

These powerful feet and sharp talons help the bird hold onto its prey.

EYES



5. How do these eyes help the bird hunt?

Excellent eyesight helps to make raptors great hunters.

DESERTARIUM

AMAZING ADAPTATIONS

All animals have structures, or body parts, that serve specific functions. For example, the structure of raptor feet allows these birds to pick up and grasp prey.

Find the Western diamondback rattlesnake in the Desertarium and answer the following questions.



Rattlesnakes have brownish skin with dark brown diamond patterns on their backs.

1. How does this pattern and coloration help rattlesnakes survive in the High Desert?

The skin and colors help the snake camouflage in the gravel and sand of their habitat.

Rattlesnakes have a rattle at the end of their tails, hence their name.

2. What is the rattle used for?

Rattlesnakes will shake their tail as a warning to frighten predators away.

Rattlesnakes have long fangs in their mouths.

3. What is the function of these fangs?

Fangs can inject venom into predators or prey.

Discuss

To the untrained eye, rattlesnakes and gopher snakes look similar. Look closely at the two types of snakes and discuss how they are similar and different. *Hint: Text on the exhibit panels may help you think about certain features and behaviors between the two species.*

ENTIRE MUSEUM

ADAPTATIONS EVERYWHERE

IDENTIFY AND FIND

Animals that live in the High Desert have many different ways of surviving. As you explore the Museum, look for the animals being described.

UNIQUE ADAPTATION	WHAT AM I?	I FOUND IT! (✓)
1. If I feel threatened, I hide my face and raise my quills to warn predators to keep away.	Porcupine	Schnitzer Entrance Hall
2. With my webbed feet, long tail and waterproof fur, I'm a perfect underwater predator.	River otter	Autzen Otter Exhibit
3. I live on high, remote cliffs so that I can see for many miles and no predators can reach my nest.	Golden eagle	Donald M. Kerr Birds of Prey Center
4. My camouflaged body and feathers that look like tree branches help me blend into a mixed conifer forest.	Great horned owl	Donald M. Kerr Birds of Prey Center
5. To get away from predators, I run upright on my hind legs like a little <i>Tyrannosaurus rex</i> .	Collared lizard	Desertarium
6. My rough, scaly skin helps protect me from drying out in the desert heat.	Desert reptiles	Desertarium
7. My strong, horny beak chomps through vegetation and my elephantlike legs with claws allow me to dig!	Desert tortoise	Desertarium
8. I have a sucker-shaped mouth that "vacuums" up aquatic insects and plants off the bottom of the river.	Sturgeon	By Hand Through Memory