



U.S. Department of the Interior
Bureau of Land Management



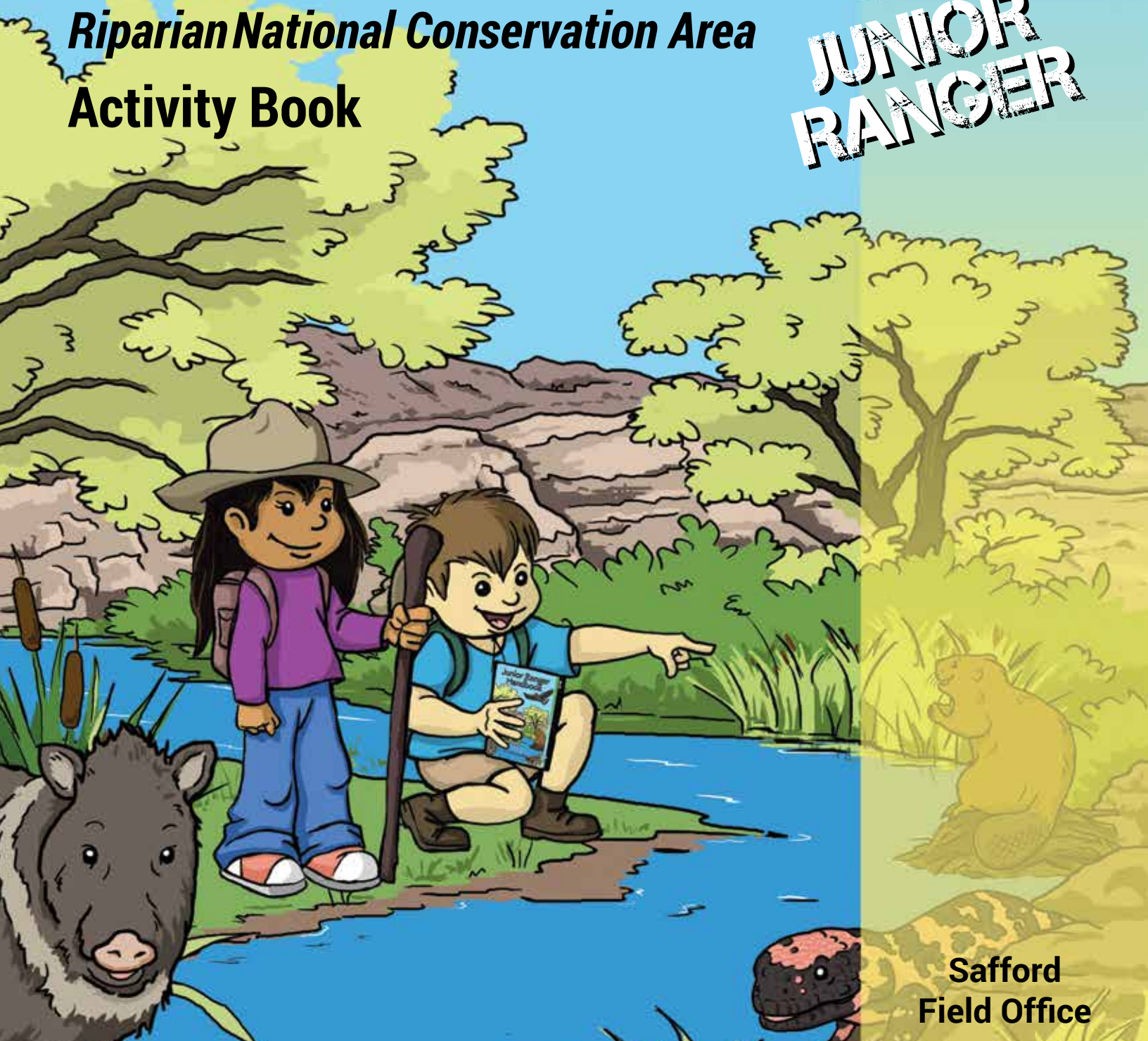
Gila Box

Riparian National Conservation Area

Activity Book



**JUNIOR
RANGER**



**Safford
Field Office**

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JUNIOR RANGERS

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Junior Ranger
Oath. back cover

The Junior Ranger Program introduces young adventurers like you to the lands and resources managed by the BLM. We hope you enjoy the activities in this book and invite you to join the adventure!

How to earn your badge

Complete six or more of the activities in this book at Gila Box Riparian National Conservation Area or at home. When you are finished, cut out the Junior Ranger certificate on the back cover, say the Junior Ranger pledge, and sign the certificate. To receive your Junior Ranger badge, email or write the BLM at the address below stating you have completed your junior ranger activity book and wish to receive a junior ranger badge.

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PUBLIC LANDS BELONG TO YOU!

The Bureau of Land Management (BLM) is a federal government agency that cares for more than 245 million acres of public lands. These lands belong to all Americans, including you. Most are in the Western United States. The BLM also manages a number of smaller sites in the Eastern United States.

The BLM manages public lands for many uses. These lands provide natural resources, such as coal, oil, and natural gas. They provide habitat for wildlife, food for grazing animals, and timber for people. The lands contain evidence of the past, such as dinosaur bones and plant fossils. Archaeological sites on public lands help us learn about people who lived in North America long ago. Today, people like you enjoy exploring the big open spaces on the lands.



GILA BOX RIPARIAN NATIONAL CONSERVATION AREA

Congress designated this area in 1990 to conserve and protect its plants, animals, waters, archaeology, and history for future generations. The Gila Box gets its name from the Gila River, which starts in New Mexico and flows into Arizona, where it enters the deep canyon called the Gila Box.

Cottonwood trees grow along the **perennial** (flowing year-round) Gila River, forming green **riparian areas** (habitats along streams). Cacti and ocotillos grow on **xeric** (a dry environment) hillsides away from the water, and **mesquite woodlands** are found between these two areas.

The presence of water attracted many people to the area. One such group was the Hohokam. The Hohokam lived along the Gila River in villages where they grew crops until around 1400 AD. The Gila River and the riparian areas it supported were a direct connection to the way of life for many Native Americans, including the Akimel O'odham (Gila River People), Tohono O'odham, Maricopa, Apache, and many others.

In 1846, General Stephen Watts Kearny and his soldiers camped here along the Gila River. Kearny's visit resulted in a map and a report that described the Southwest to the rest of the world.

A stone cabin, now known as Serna Cabin, is located next to Bonita Creek and tells the story of American and Mexican efforts to homestead the area.

Clinging to steep canyon walls, sure-footed bighorn sheep can often be seen eating plants. Raptors, such as zone-tailed hawks and peregrine falcons, rule the skies. Roadrunners can be seen darting across the road, and herds of javelina can be seen running along hillsides.

We invite you to get outdoors and explore the Gila Box. Have a picnic or enjoy a hike. Look for hummingbirds, bats, butterflies, and moths pollinating wildflowers. If you are lucky, you may see a colorful Gila monster basking in the sun! Listen for birds and buzzing insects. Learn about the history of this area. When you get to know the Gila Box, you will want to conserve and protect this wonderful place, too.



A WORLD OF ADAPTATIONS

The Gila Box is home to many aquatic and land-dwelling animals and plants. Some, like the coyote, can live almost anywhere; but others, like the Sonora mud turtle, must adapt to live in their natural **habitat** (the place or environment where an animal or plant lives). **Adaptations** can include behaviors, such as a raccoon nesting in trees and being mostly nocturnal (active at night) to stay protected and find food. They can also be physical, like the Gila monster, a lizard that is able to survive for months in the desert without food because it stores fat in its large tail.

Draw a line from the adaptation to the animal.

This animal's musky odor allows it to be recognized by herd members.

1



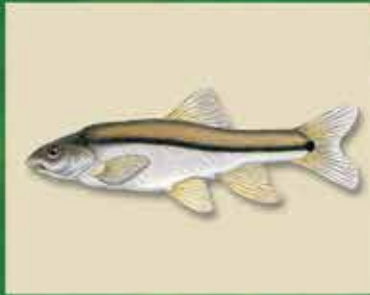
Bobcat

Curved hooves provide traction for this animal, allowing it to climb rocky areas.

4



Rattlesnake



Longfin Dace

This animal can rotate each of its wings in a figure eight to fly forwards, backwards, up, down, sideways, or hover.

2



Rufous Hummingbird

This animal uses its long tail for balance.

6

This animal uses its forked tongue to taste the air and has a heat sensor between the eye and mouth to detect prey items.

3



Bighorn Sheep

This animal can survive in a dry stream by living in moist mats of algae.

5



Javelina

Small tufts of hair on the ears act as antennae, allowing greater hearing.

7



Coatimundi

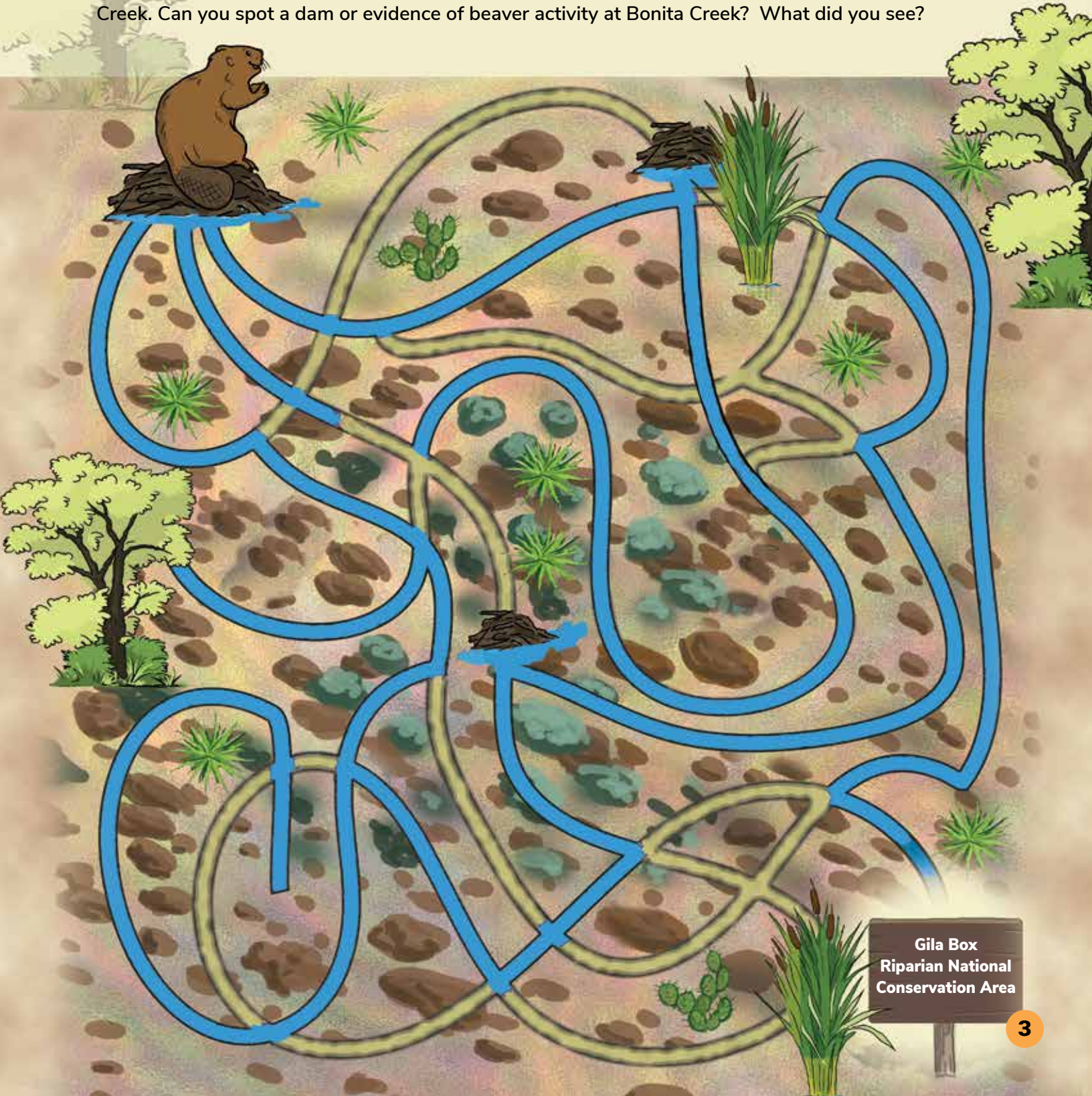
2

Answers: 1 = Javelina, 2 = Rufous Hummingbird, 3 = Longfin Dace, 4 = Bobcat, 5 = Bighorn Sheep, 6 = Coatimundi, 7 = Rattlesnake

Answers:

HELP THE BEAVER FIND HIS HOME

The beaver (*Castor canadensis*) is North America's largest semi-aquatic rodent. Adults can be up to 4 feet long and weigh over 60 pounds. Beavers build lodges and dams out of sticks, rocks, and mud alongside perennial streams that support riparian vegetation. Their lodges are dome-shaped and built in water. Beavers cut down trees using their strong teeth, which continue to grow throughout their entire life. Beavers are **herbivores** (plant-eating animals). They eat tree bark, leaves, roots, twigs, and water plants. Ponds and wetlands that are formed by beaver dams provide habitat for other wildlife species and filter sediment from the stream. Beavers and their dams can be found throughout Bonita Creek. Can you spot a dam or evidence of beaver activity at Bonita Creek? What did you see?



Gila Box
Riparian National
Conservation Area

NATIVE FISH

WORD SEARCH

These native fish live in Bonita Creek and the Gila River. Find their names in the puzzle list. They can be forward, backward, or diagonal.



Desert Sucker

- Desert Pupfish**
- Desert Sucker**
- Gila Chub**
- Gila Topminnow**
- Longfin Dace**
- Loach Minnow**
- Speckled Dace**
- Spikedace**
- Sonora Sucker**

NATIVE FISH



Gila Chub



Gila Topminnow



Longfin Dace



Speckled Dace



Spikedace



Sonora Sucker



Loach Minnow

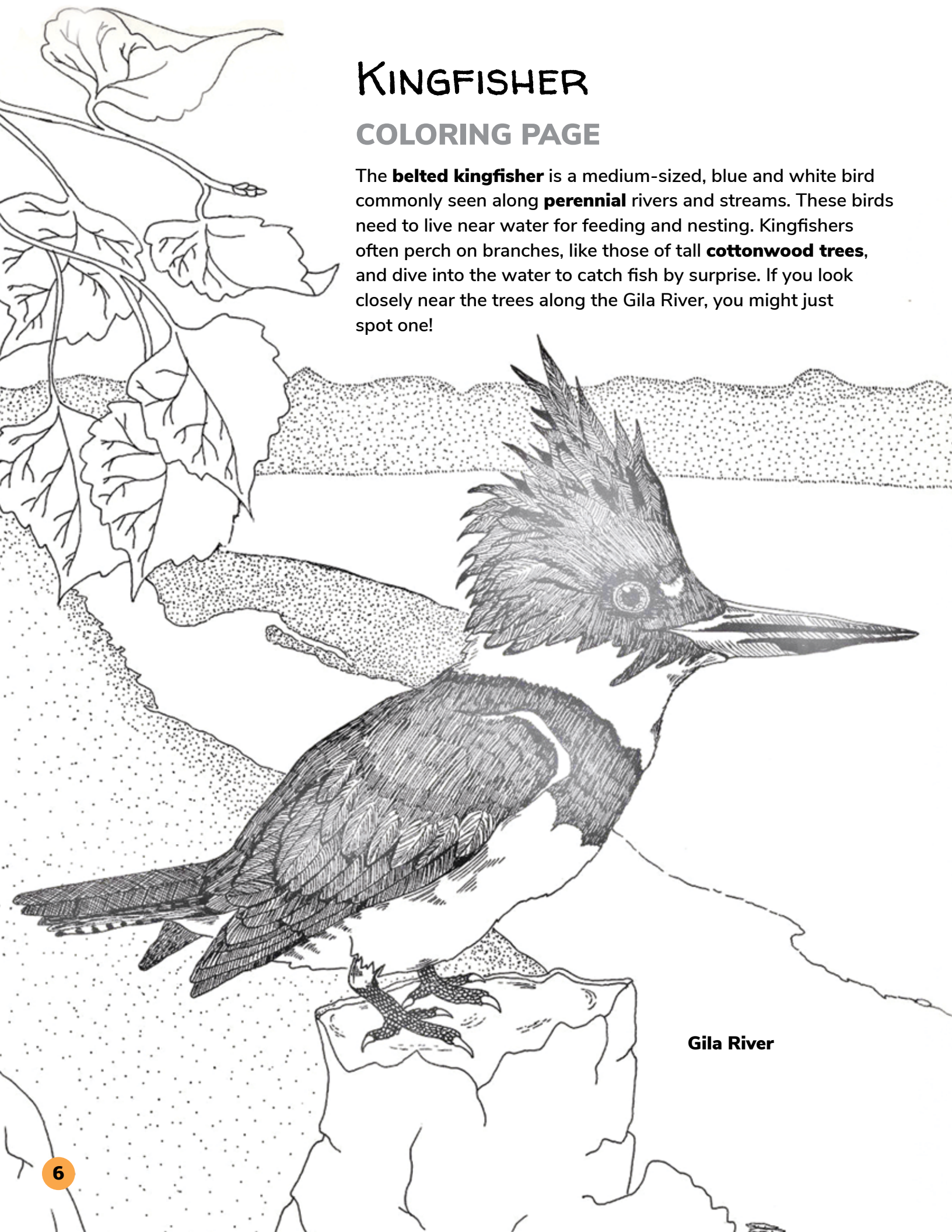


Desert Pupfish

KINGFISHER

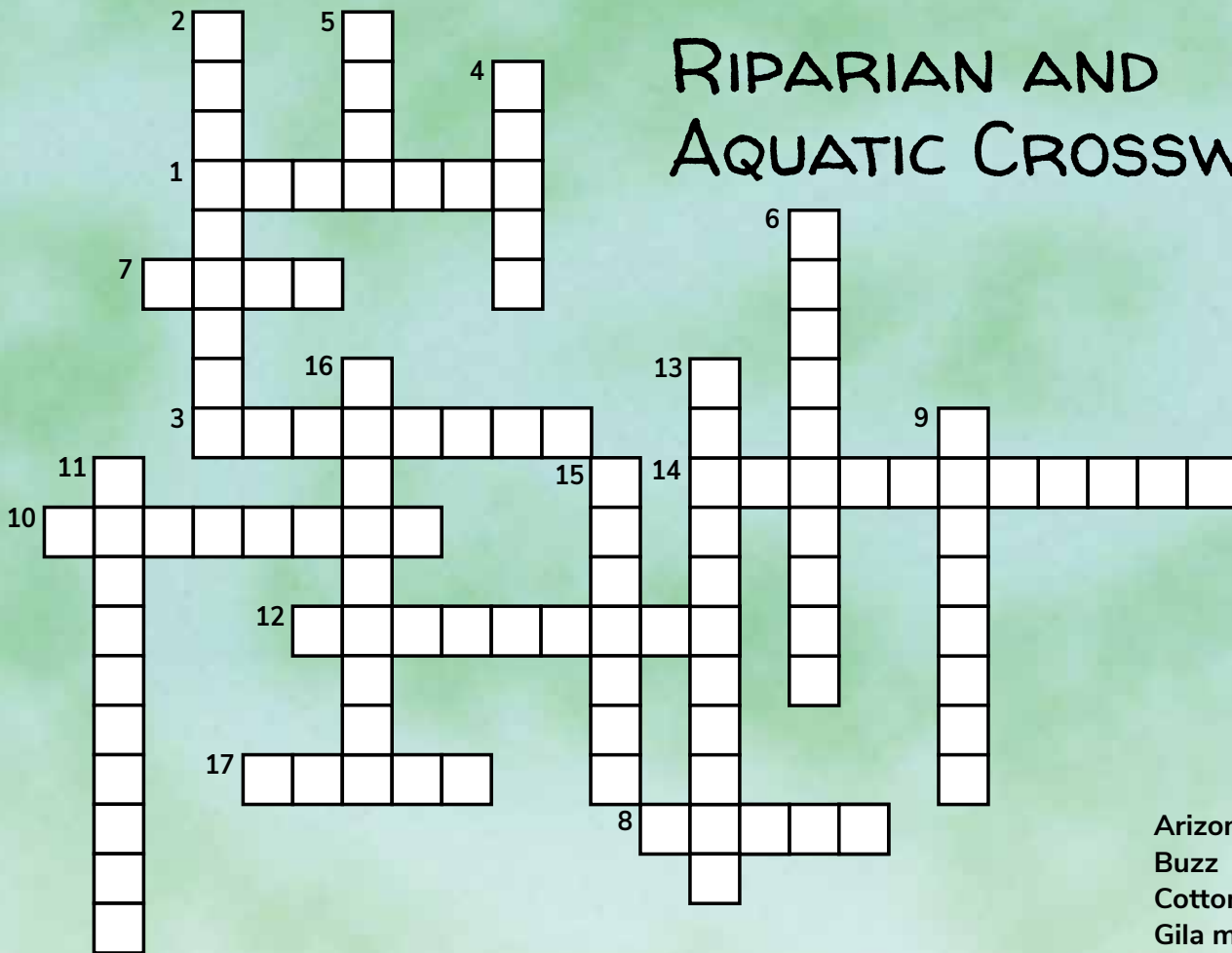
COLORING PAGE

The **belted kingfisher** is a medium-sized, blue and white bird commonly seen along **perennial** rivers and streams. These birds need to live near water for feeding and nesting. Kingfishers often perch on branches, like those of tall **cottonwood trees**, and dive into the water to catch fish by surprise. If you look closely near the trees along the Gila River, you might just spot one!



Gila River

RIPARIAN AND AQUATIC CROSSWORD



ACROSS

1. The state in which the Gila Box is located.
3. The type of plant community that grows along rivers like the Gila River.
7. The number of native fish found in the Gila Box.
8. Ocotillos grow on a _____ hillside.
10. _____ woodlands are found between dry, cactus-covered hillsides and lush green plant communities along the river.
12. State where the Gila River gets its start.
14. Small minnow that constructs nests in sandy stream bottoms.
17. Stone cabin in the Gila Box.

DOWN

2. River where the Gila Box occurs.
4. I will pick up _____ that I see.
5. The humming sound of insects.
6. An important tree that grows along the Gila River.
9. The Hohokam lived in _____ along the Gila River.
11. A plant-eating animal.
13. If you are lucky you may see a _____ basking in the sun.
15. Where the animals live.
16. An invasive tree on the river.

Arizona
 Buzz
 Cottonwood
 Gila monster
 Gila River
 Habitat
 Herbivores
 Longfin dace
 Mesquite
 New Mexico
 Nine
 Riparian
 Salt cedar
 Serna
 Trash
 Villages
 Xeric

Answers:
 1. Arizona, 2. Gila River, 3. Riparian, 4. Trash, 5. Buzz, 6. Cottonwood, 7. Nine, 8. Xeric, 9. Villages, 10. Mesquite, 11. Herbivores, 12. New Mexico, 13. Gila monster, 14. Longfin dace, 15. Habitat, 16. Salt cedar, 17. Serna

RESPECT WILDLIFE

Here are rules to follow when encountering wildlife!

When you're visiting the Gila Box or any place outdoors, it's important to be careful and not disturb wildlife. People can affect wildlife in negative ways. Our behavior can hurt their environment or cause animals to become aggressive. In extreme cases, our actions can lead to animals being moved from their homes. Always try to leave nature as you found it—help protect animals and the places they live.

1. Do not disturb, follow, or approach wildlife.
2. Never feed wildlife. Feeding them can hurt them, change how they act towards humans, and put them in danger with other predators.
3. If you have pets, keep them on a leash and out of the water.
4. Observe wildlife at the distance of least two school buses, or more for bigger animals. If an animal reacts to you, that means you're too close. And if you're close enough for a selfie, you're definitely too close! Instead, use binoculars or a zoom lens to see them better. If an animal comes near you, back up and give it space.



Coatimundi



Javelina



Bighorn Sheep

A naturalist is someone who studies living things in the outdoors. You can be a naturalist by observing wildlife and plants in the forest, desert, or even in your backyard! Use this journal to describe anything in nature you see around you!

MY NATURE JOURNAL

A spiral-bound notebook with a yellow cover and a black spiral binding. The notebook is open to a page with blue horizontal lines. The page is divided into two columns by a vertical line. The left column is wider than the right column. The notebook is surrounded by green leaves and red ladybugs.

HOME SWEET CAVE

Bats spend daylight hours sleeping in caves, crevices, or trees until night, when they emerge to hunt insects.

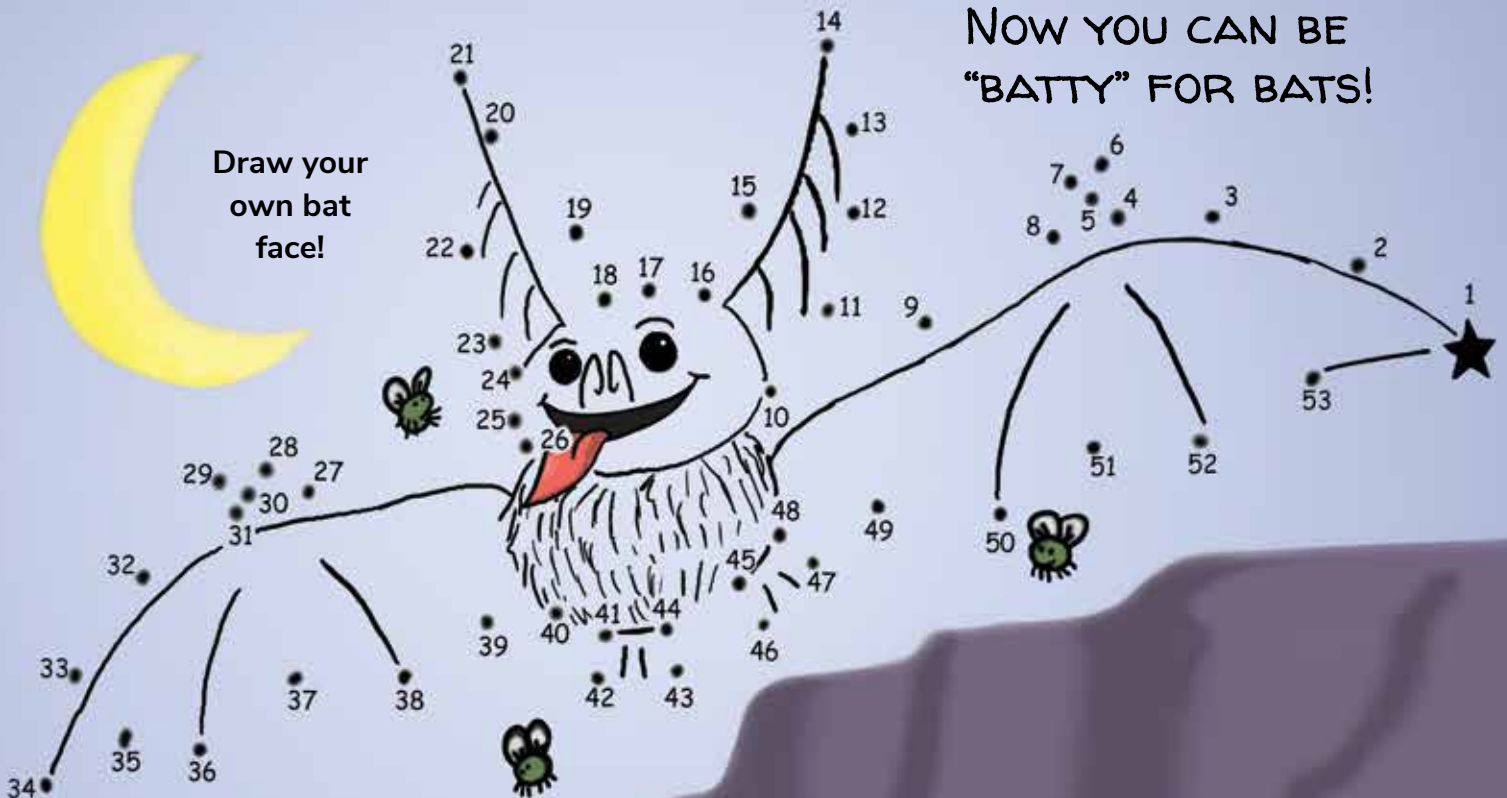
Once, people thought bats were birds without feathers. Now we know bats are mammals because:

1. Bats are warm blooded.
2. Bats nurse their babies with milk.
3. Bats have fur.

Bats are the only mammals that can fly. Their wings are made of two thin layers of skin stretched over their arms and long fingers. If we had fingers like a bat, they would be longer than our legs! The scary stories about bats are not true. When you see a bat, say "Thank you, friend." Bats eat hundreds of insects each hour. Without bats, we would be swatting at more bugs!

Connect the numbered dots to draw a bat.

NOW YOU CAN BE "BATTY" FOR BATS!

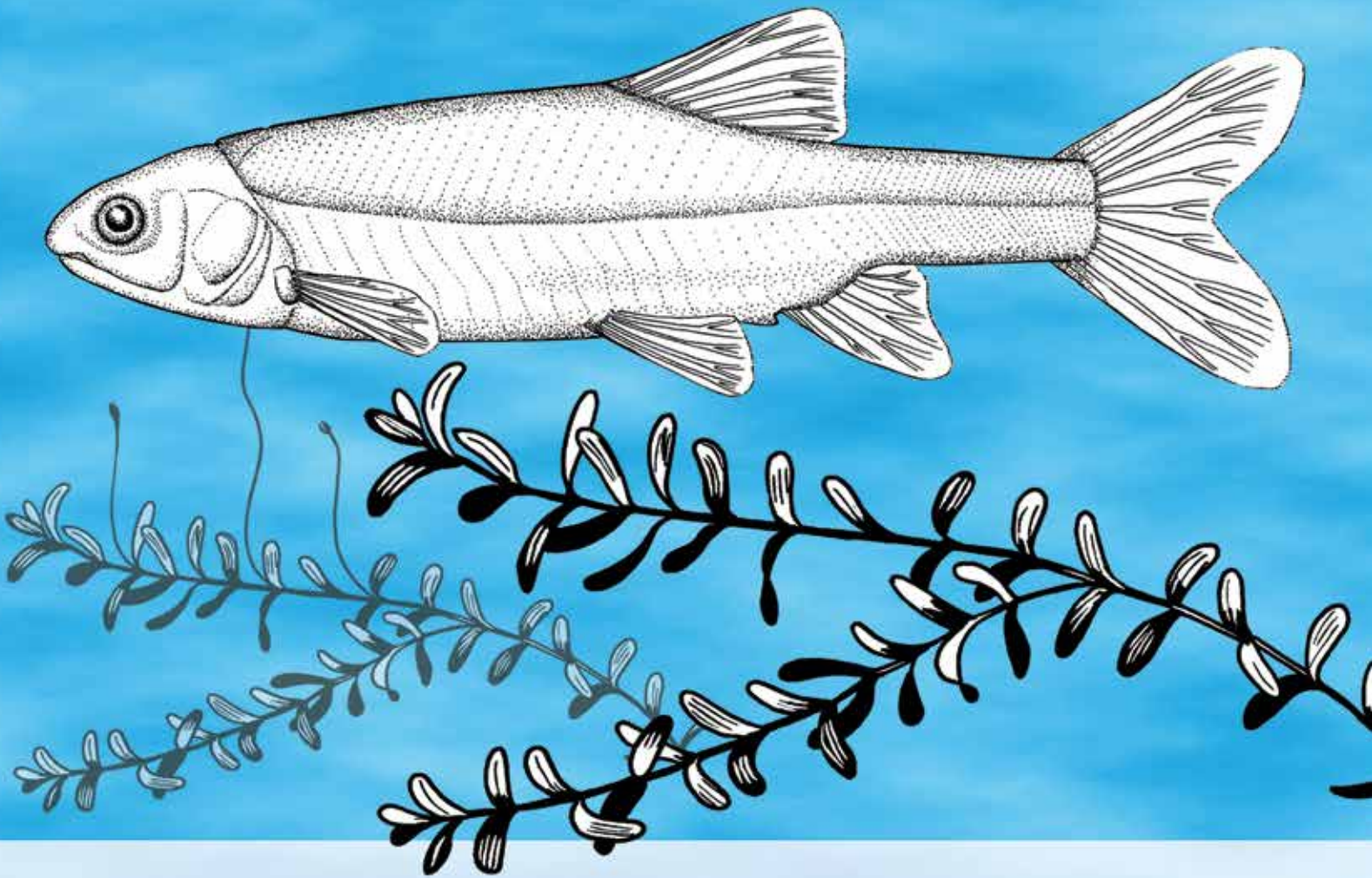


Draw your own bat face!

LONGFIN DACE

Agosia chrysogaster

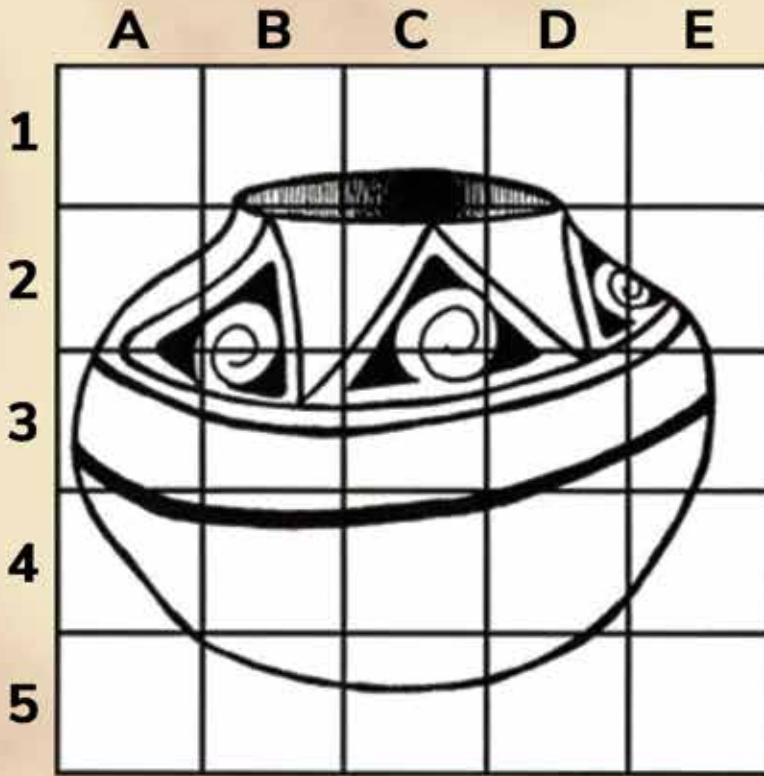
There are 9 native fish species that call the Gila Box home, including the longfin dace. The longfin dace is a small, hardy fish that is **native** (naturally belongs to an area) to Arizona. It is less than 4 inches long and lives up to 3 years. The longfin dace is found throughout the Gila Box where it occupies a wide variety of small-stream habitats. This fish feeds on algae and aquatic invertebrates and constructs saucer-shaped depressions in sandy-bottomed, shallow pools where they lay their eggs. If you look closely in the water, you may see their nests. Loss of habitat and the presence of **nonnative** (not naturally occurring in area) fish threaten the survival of the longfin dace and other native fish species.



What did we learn about the dace?

1. Is this animal a bird, mammal, reptile or fish? _____
2. What is its common name? _____
3. What does native mean? _____
4. Is it a predator, prey, or both? _____

EXPLORING EARLY CIVILIZATIONS

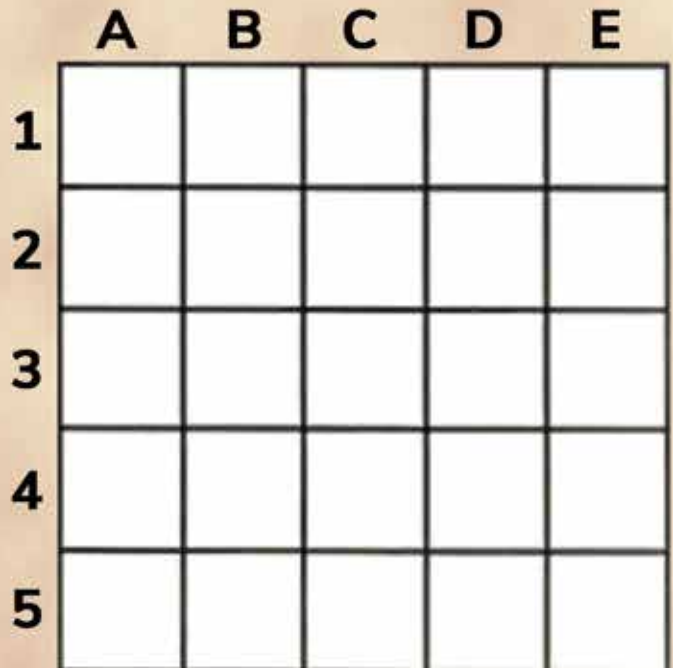


Archaeologists study people and places that came before us. They often draw pictures to record what they have discovered in the field. You can practice being an archaeologist. Try to draw the pot above in the smaller grid below. Use the squares to help guide you.



Important Tip

When you visit public lands, it's important to leave things just as you found them. **Artifacts** (objects made by humans in the past), such as old tools, pottery, or arrowheads, tell a story about the people and animals who lived here long ago. If you move or take them, it's like tearing a page out of history's book that others can't read. By leaving artifacts where they are, you're helping protect these special places so everyone can learn and enjoy them for years to come.



WHO ARE THE HOHOKAM?

The Hohokam people migrated from Mexico to the Gila River and lived in the Gila Box area from A.D. 1 to 1400 – that’s a long time!



The Hohokam lived in small villages along the river, which was very important to them. The water was vital for growing crops, including corn, beans, squash, agave, and cotton. The Hohokam made beautiful red pottery for cooking, storing food, and for other uses. The pottery they created was plain, decorated with geometric designs, and sometimes included drawings of animals and birds.



The O’odham people (including the Tohono O’odham and Akimel O’odham) are widely considered descendants of the Hohokam people. The O’odham word for Hohokam is “Huhugam,” which means “those who have gone before” or “all used up,” reflecting their ancestral connection to the Hohokam. The Hohokam cultural traditions and knowledge are carried forward by their O’odham descendants, who continue to honor and preserve the legacy of their ancestors.

WORD SCRAMBLER:

Use what you have learned to unscramble these words!

AKHOOHM = _____

TRYETOP = _____

LGIA VERIR = _____

QUSSHA = _____

HELLO ARCHAEOLOGISTS

Archaeologists learn about past cultures by investigating sites and artifacts. They also learn from the stories and experiences of the descendants of people who lived at the sites and used the objects we now call artifacts.

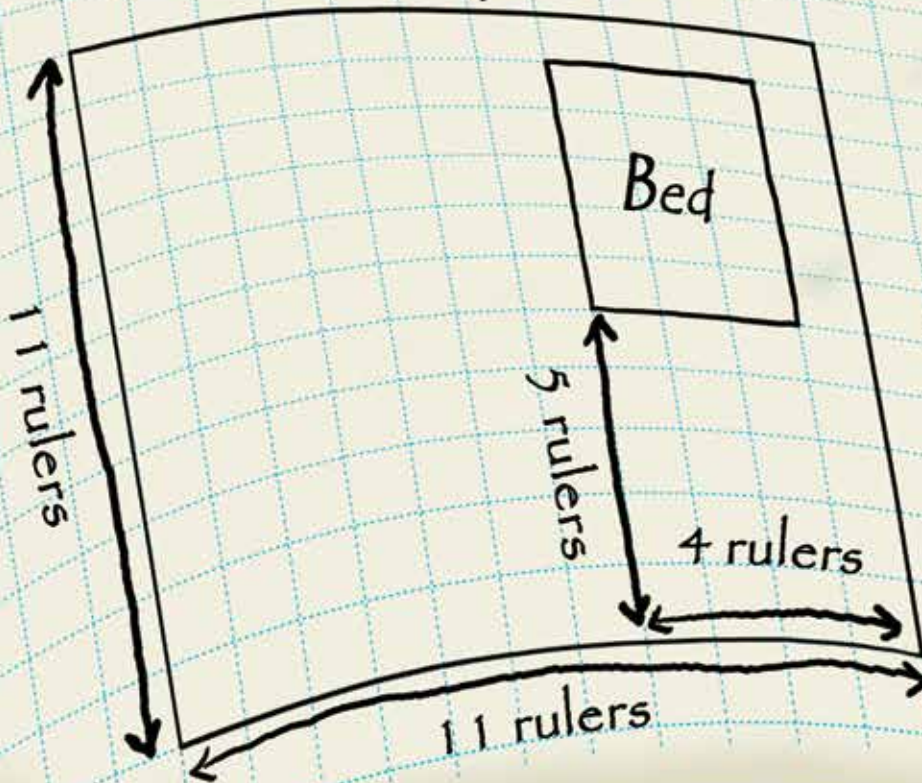
To learn about the way people lived, archaeologists need to know where artifacts are found. To do this, they make detailed maps of the houses and the artifacts inside.

Make an archaeologist's map of your bedroom. You will need a 12-inch ruler and a pencil for this activity.

Artifact: Any object made or used by past people.

Archaeological site: A place where people lived and left objects behind.

Example



YOUR ROOM

Step 1: Measure each wall in your bedroom. Count how many ruler lengths it takes to get from one corner of each wall to the next.

Step 2: On the grid draw all four walls of your room. Each square is one ruler length long. If you counted 12 ruler lengths on one wall then you would count 12 squares.

Step 3: Now, map the location of your bed. Start at one corner of your bed. Count how many ruler lengths it takes to reach the closest wall. Now, turn toward the next nearest wall and count ruler lengths. Do this for each corner of your bed and each piece of furniture you want to map. You now have a scale drawing of your room (feature) and your furniture (artifacts).

GILA BOX WORD SEARCH

Finish the words in the sentences below and then find the words in the puzzle. Words may go up, down, forward, or backward.

- _____ have built many dams along Bonita Creek.
- Always carry plenty of _____ when you are hiking.
- If you're lucky you might see a _____ sheep along the cliffs.
- _____ are often seen darting across roads in the Gila Box.
- The _____ River flows for 23 miles through the Gila Box RNCA.
- In the evening, small _____ can be seen swooping across the skies.
- Be careful to watch for _____, but do not harm them!
- Large _____ trees provide shade for picnics and shelter for birds.
- Great horned _____ nest in large sycamore trees.
- Ocotillo plants drop their _____ to conserve water when the weather is dry.
- Gila _____ are one of 9 native fish species in Bonita Creek.
- General Stephen Watts _____ and his soldiers camped along the Gila River in 1846.
- Peregrine _____ nest on steep cliffs along the Gila River.
- The Gila monster is a large _____.
- Hummingbirds, bats, butterflies, and _____ pollinate wildflowers.
- Vehicles should stay on _____ to protect plants and wildlife.



- bats
- beavers
- bighorn
- cotton
- cottonwood
- falcons
- Gila
- Kearny
- lizard
- moths
- owls
- rattlesnakes
- roadrunners
- topminnow
- roads
- water

Answers: 1 = beavers, 2 = water, 3 = bighorn, 4 = roadrunners, 5 = Gila, 6 = bats, 7 = rattlesnakes, 8 = Cottonwood, 9 = owls, 10 = cotton, 11 = Topminnow, 12 = Kearny, 13 = falcons, 14 = lizard, 15 = moths, 16 = roads.



**NATIONAL
CONSERVATION
LANDS**

MORE PLACES TO PLAY AND LEARN ON THE NATIONAL CONSERVATION LANDS



**Put check marks
in circles next to places you visited.**

To Learn more check out:
<https://www.blm.gov/programs/national-conservation-lands/arizona>



Bureau of Land Management

JUNIOR RANGER

As a Bureau of Land Management Junior Ranger,
I promise to:

- Do all I can to help preserve and protect the natural and cultural resources on our public lands.
- Be aware of how my actions can affect other living things and the evidence of our past.
- Keep learning about our important heritage.
- Share what I have learned with others.

Junior Ranger Signature _____

Date _____

