

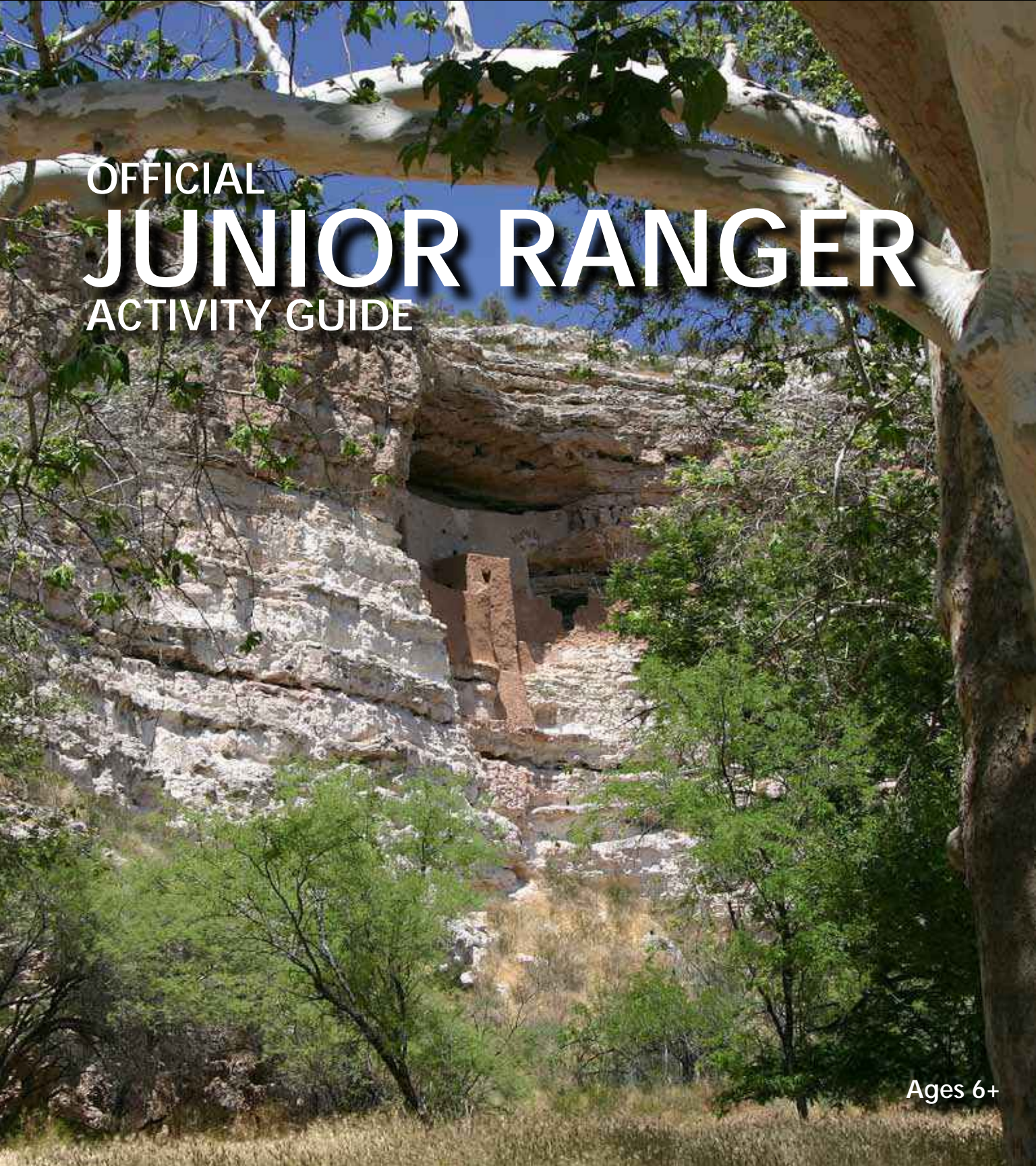
Montezuma Castle

National Park Service
U.S. Department of the Interior

National Monument
Arizona



OFFICIAL JUNIOR RANGER ACTIVITY GUIDE



Ages 6+

Welcome, Ranger!

Junior Park Rangers explore, learn about, and help protect national parks. Follow these instructions to earn your official Junior Ranger badge and certificate. You can also purchase a Junior Ranger patch if you show your certificate at the store.



How old are you?

If you are 6 or 7 years old, do the activities on each page with the Sonoran mud turtle.



If you are 8 or 9, do the activities that have the turtle and the activities with the Arizona sycamore leaf.



If you are 10 or older, do all the activities in the book, including those with the macaw.



Remember:

Rangers Work Safely!

It can get really hot out there. Be sure you drink lots of water, and wear sunscreen. Rangers always wear their hats outside, so take yours if you have one!

To become a Junior Ranger at **Montezuma Castle**, do pages 3–7 and 12–14.

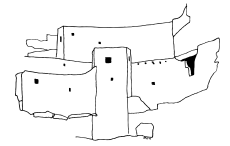
To be a Junior Ranger at **Montezuma Well**, do pages 7–14.

Once you finish, bring your book to the visitor center or ranger station to get your official Junior Ranger badge and certificate!

Grown-Ups

The Junior Ranger program should take 30 minutes to an hour for your child to complete, about as long as most people spend visiting the monument.

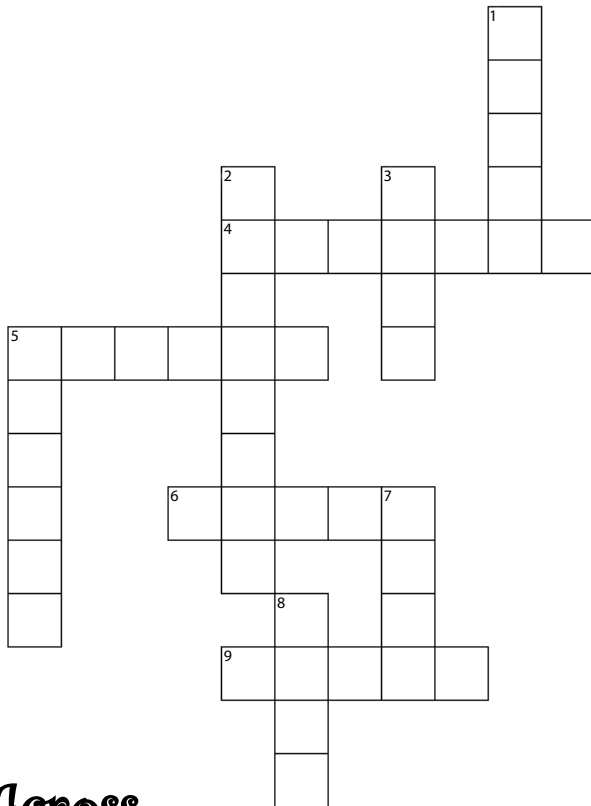
If your child does not finish before you leave, no problem! The monument's address is on the back of this booklet. They can finish later and mail it to us, and we'll send their official Junior Ranger badge and certificate to your address.



Explore the Museum



Visit the museum inside the Montezuma Castle visitor center. Read the exhibits, and see if you can find the cool facts that answer these questions!



Down

1. The Sinagua used many plant resources from the natural world around them. They used the _____ plant to make rope, sandals, needles, and matting.
2. President _____ Roosevelt set aside Montezuma Castle National Monument in 1906 to be preserved for future generations.
3. In its south-facing cliff alcove, Montezuma Castle is shaded and _____ in the summer, but sunny and warm in the winter.
5. Successful farmers, the Sinagua cultivated corn, beans, squash, and _____.
7. _____ was an important (and tasty) mineral the Sinagua found near Montezuma Castle and used for trade.
8. Many _____ clans trace their ancestors to Montezuma Castle, Montezuma Well, and Tuzigoot.

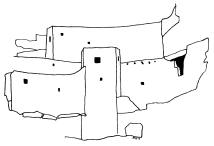
Across

2. The _____ may have been the first farmers in the Verde Valley, arriving around 700 CE.
5. Dr. Harold _____ chose the name "Sinagua" for the prehistoric culture of northern Arizona, but no one knows the name they called themselves.
6. People gathered bean pods and berries from Mesquite and Hackberry _____.
9. The Verde Valley forms the most easily traveled _____ from the lowland deserts to the Colorado Plateau.

What's CE?

CE is an abbreviation archeologists use for "Common Era." It means exactly the same thing as A.D.

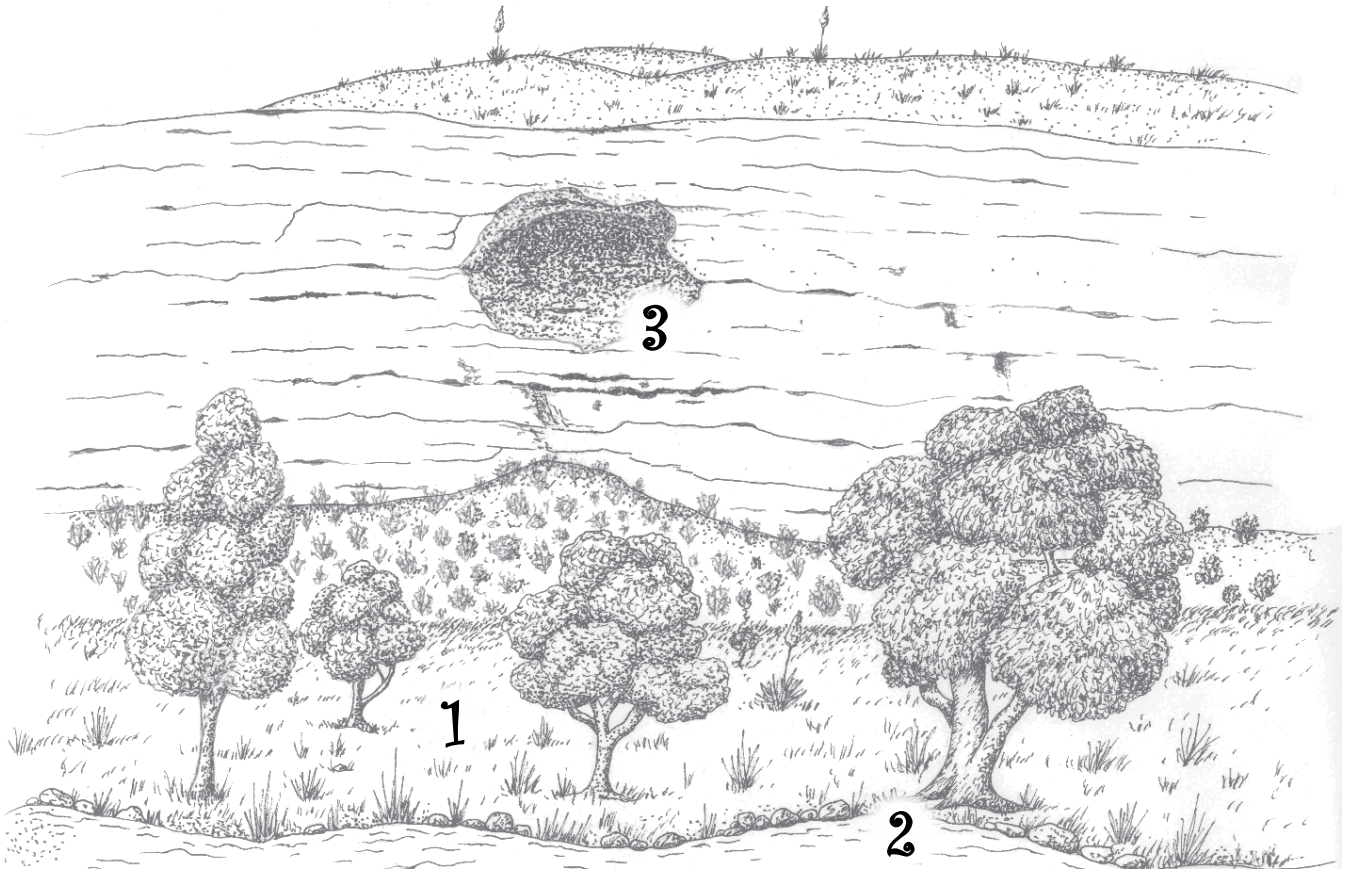
For B.C., archeologists say BCE or *Before Common Era!*



Where would you build?

Many visitors wonder why the people here built their village against the cliffs, instead of down on the flat ground. See if you can help figure it out!

The people who lived here had to find someplace to build homes for shelter. They also needed a place to grow corn, beans, and squash for food, as well as cotton for clothing.



1. Flat Land

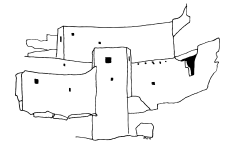
Spring snowmelt and late summer storms mean flat land gets flooded. But floods also leave behind new soil for farming!

2. Beaver Creek

Water attracts deer, elk, and other wildlife. Tall sycamore, ash, and walnut trees growing along the banks give lots of shade.

3. Limestone Cliffs

Cliff homes like Montezuma Castle have great views and don't get flooded. Because they face south, these rooms are shady in summer and sunny in winter.



If you built your home on the flat ground along Beaver Creek, what do you think would happen to your house when it floods?



Flooding is only one of many possible reasons people might have had for building Montezuma Castle and Castle A against the cliffs. What other reasons can you find along the trail that would make the cliffs good for building?



Besides places to farm and build, what other resources surrounding Montezuma Castle would help make this a good place to live?

Did you notice?

Look at the different designs at the top of the pages in your Junior Ranger Activity Book. You might have seen them before on Native American pottery, jewelry, or baskets. All three represent water.



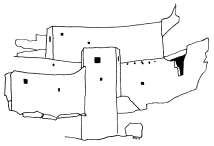
The stairstep design represents thunderclouds that bring life-giving storms, called monsoons, in July and August. You'll see this design on all of the pages for Junior Rangers at *Montezuma Castle*.



The second design shows waves. You'll see it on all of the pages for Junior Rangers at *Montezuma Well*.



The last design is a combination of both. It shows up on pages meant for all Junior Rangers at *both* the Castle and the Well. Can you imagine how important water was to people in the desert?



Getting Around

The people of the Verde Valley traded with cultures all over the Southwest, some of them from hundreds of miles away.



Circle the ways you travel when you have to go long distances. Do you...

Paddle a Canoe? Walk on your feet? Ride in a vehicle? Fly in an airplane?

The people here had no boats, automobiles, or airplanes. They had to walk! And since the desert is so dry, they couldn't go straight there—they had to stay close to rivers and creeks.

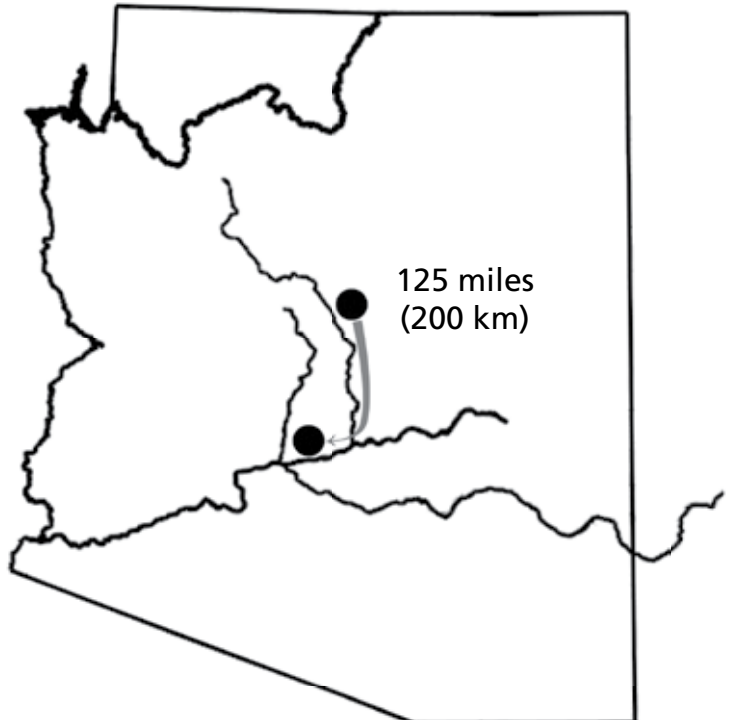


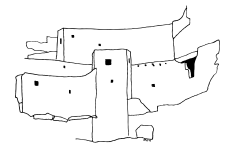
After you finish walking the trail at Montezuma Castle, write down how long it took you to go all the way around:

The trail here is $\frac{1}{3}$ of a mile long. Multiply your time by three—that is how long it would take you to walk one mile. (If you multiply your time by two instead, that is how long it would take to walk a kilometer.)



How long would it take you to walk to the desert near modern Phoenix, the ancient home of the Hohokam people, if you wanted to trade with them?





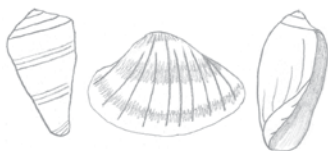
Knowing your Neighbors

Culture is a word used to describe the behavior of a group of people. It includes the language they speak, their beliefs, the kinds of clothes they wear, the music they like, and lots of other things.

When people from different cultures meet, each group can learn a lot from the other.

Look at this map—the Sinagua were surrounded by other cultures! As they traveled and traded with each other, each group obtained items from far away and also learned new ideas.

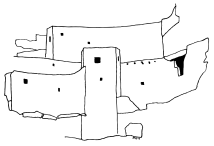
Look in the museum or ask a ranger, and circle the items and ideas below that the Sinagua got from other cultures by trading.



Cultural Exchange?

Can you think of a culture or person who has influenced you? What effect did they have?

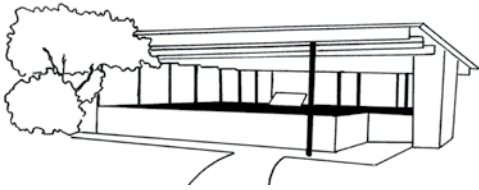
A:



Living at the Well

People have lived at Montezuma Well for a long, long time. The earliest people moved into the Verde Valley over 10,000 years ago. By 700 CE, the first farmers were planting their crops here.

Today, you can see different kinds of homes from over 1,000 years of history at the Well. While you visit, see if you can find all four kinds of houses that are here.



What's it called? _____

Where is it? _____

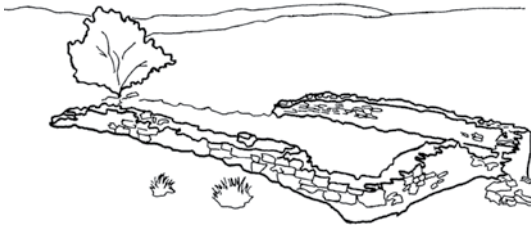
When was it built? _____



What's it called? _____

Where is it? _____

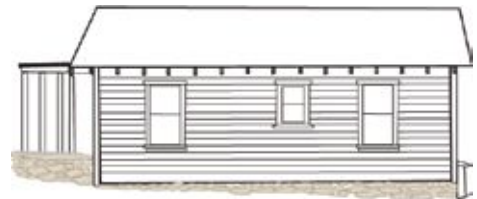
When was it built? _____



What's it called? _____

Where is it? _____

When was it built? _____



What's it called? The Back House

Where is it? Near the Picnic Area

When was it built? 1930

Made to Last

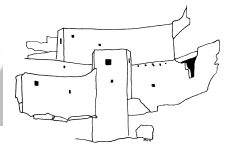
How old is
Montezuma Well's
oldest house? _____

← This Year

← Approximate year the Pit House
was Built

← Pit House's Age!

Do you think your house will still be around after that many years?



That's a lot of water!

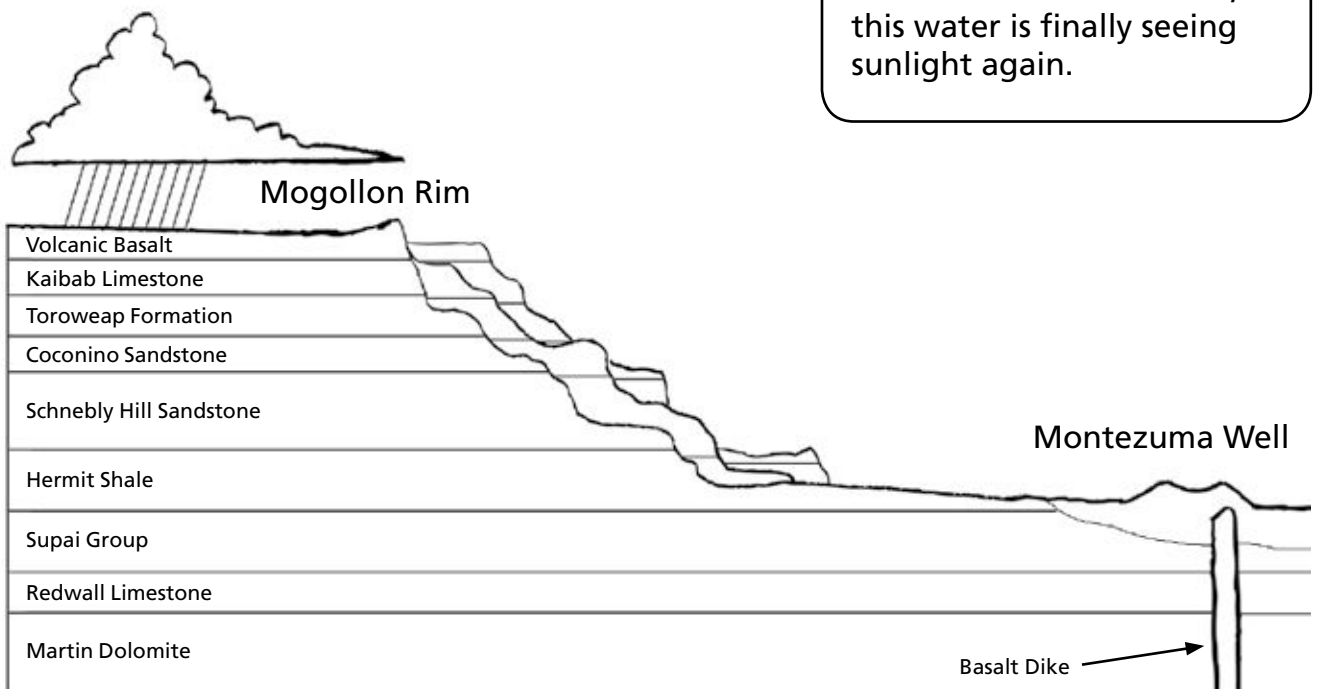
Every day, about 1.5 million gallons of water flow into Montezuma Well from two springs at the bottom. But where does this water come from?

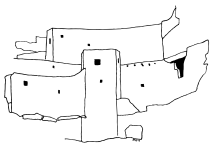
All this water started as rain and snow on top of the **Mogollon Rim**, which you can see to the north and east from the rim of Montezuma Well. Over thousands of years, it slowly trickled through layers of rock until it reached the **Redwall Limestone**.

Redwall Limestone has lots of cracks and holes in it, so the water was able to seep very slowly toward Montezuma Well. But when it gets here, it runs into a solid wall of rock called a **Basalt Dike**. This dike acts like a dam and forces the water up to the surface.

Draw the path of the water on the diagram below. Why do you think all this water is so important here in the desert?

Striving to Understand
Science is always learning more! Until 2011, the source of Montezuma Well's water was a mystery. That April, geologists revealed that the water fell over 10,000 years ago as rain and snow. After ten millennia, this water is finally seeing sunlight again.





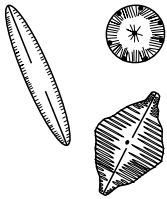
Nowhere Else on Earth

Plants and animals—and people—live in places where they can find the things they need to survive. These places are called **habitats** or **ecosystems**.

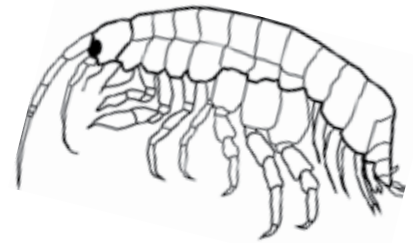
Plants grow where they can find water, sunlight, and the right kind of soil. Bees live where they can find flowers with pollen. Lizards come out when it's warm and they can find insects to eat.



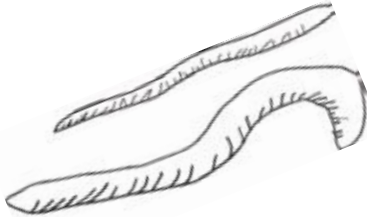
Montezuma Well has a very special ecosystem. The water may look calm, but there's a lot of action happening beneath the surface, with five kinds of plants and animals that live *nowhere else on earth*! Find out what they are and write their names with the drawings below. (*We've put their scientific names in parentheses beneath each one, just for fun! What do you notice about them?*)



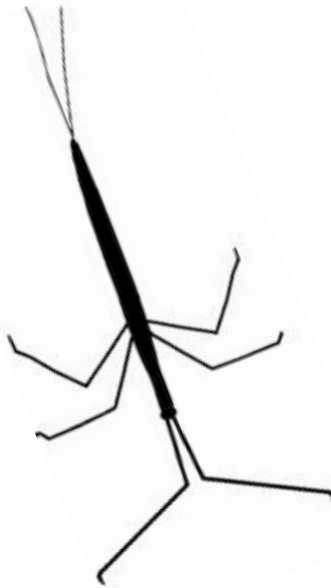
D _ _ I _ _
(*Gomphonema montezumense*)



A _ _ _ _ _ D
(*Hyalella montezuma*)



_ E _ _ H
(*Erpobdella montezuma*)



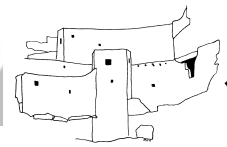
_ A _ _ _ _ _ C R _ _ _ _ _
(*Ranatra montezuma*)



_ N _ _ _ _
(*Pyrgulopsis montezumensis*)



What kind of animal does not live in Montezuma Well?



Surface Water: Swallet, Outlet, Ditch

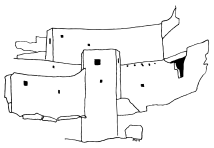
Almost all life on earth needs water to survive. At Montezuma Well, there is a lot of it—over 15,000,000 gallons (57,000,000 liters) just inside the Well. That's enough to fill over 20 Olympic-sized swimming pools!

But the Well's water doesn't stay there! Follow the Outlet Trail to find where the water comes out. What did the Sinagua people channel the water into? What other body of water flows nearby? Write what you think each one was used for.

1. _____

2. _____





Sit, Look & Listen

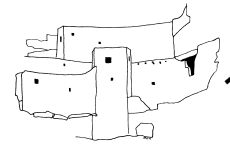
Find a quiet place where you can sit awhile at Montezuma Castle or Montezuma Well.

Use your senses. What do you see? Do you hear or smell anything you've never noticed before? Write about it or draw it in the space below.



Knowing Nature

The people of the Verde Valley had to be closely acquainted with the natural world. The movement of the stars, sun, and moon told them when to plant and harvest their crops. The arrival of summer storms, called monsoons, meant the survival of corn and other important foods.



Poetry Corner

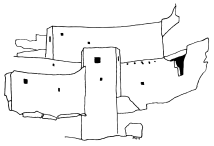
A cinquain is a short poem that always has five lines. Follow the example and rules below to write your own cinquain about your visit to Montezuma Castle or Montezuma Well.

Line 1: A person, place, or subject the poem is about.	<i>Sycamore</i>
Line 2: Two words that describe it.	<i>Massive, Strong</i>
Line 3: Three actions that it does.	<i>Growing, Changing, Reaching</i>
Line 4: A four-word phrase about it.	<i>Making me feel small</i>
Line 5: One new word that renames the subject.	<i>Guardian.</i>

Notice that it doesn't have to rhyme. Now it's your turn!

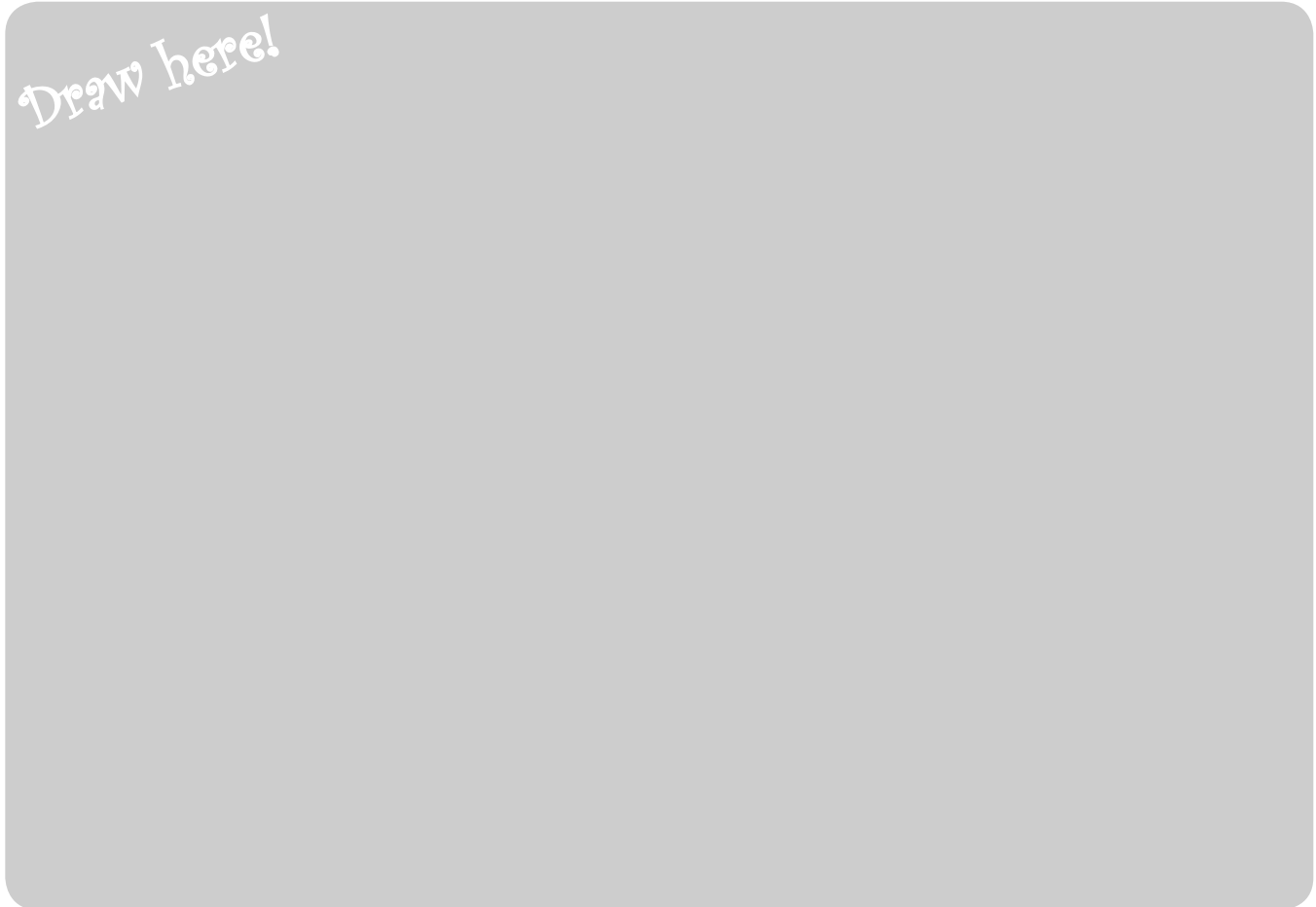
Learning from Others

The Native Americans of the Verde Valley traded with other cultures. Along with items from far away, they learned new ideas from people who were different from them. We do the same thing today—Cinquains are a kind of American poetry that was inspired by Japanese Haiku!



Share with a Park Ranger...

Write about something you learned today that surprised you or that you found interesting. Draw a picture to go along with what you learned. Share your picture with the park ranger when you get your badge.





Certificate of Achievement

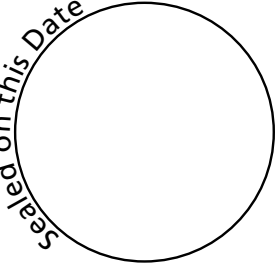
This certifies that




_____ has admirably performed all the necessary requirements
and has qualified to become a Junior Park Ranger at

Montezuma Castle National Monument

Sealed on this Date



By Park Ranger



As a Junior Ranger, I will

Leave all plants, animals, and other objects as I found them for others to enjoy,

Put litter in a trash can or recycle bin,

Learn more about national parks all over the United States, and

Share what I have learned with my family and friends.

Final Thought

Park Rangers come from many backgrounds. The rangers who wrote this book came from Arizona, Tennessee, New York, Washington, Michigan, and Venezuela. Some are naturalists and scientists, while others are artists, linguists, police officers, computer programmers, and veterans.

One of rangers' most important jobs is preserving America's special places and telling their stories until the next generation of rangers is ready to take over. Will you someday wear the flat hat and protect these national treasures?

