

**Tuzigoot**

National Park Service  
U.S. Department of the Interior

National Monument  
Arizona



# Junior Archeologist Program

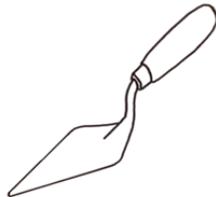




**Welcome, Ranger! Junior Park Rangers explore, learn about, and help real rangers protect national parks. Follow these instructions to earn your official Junior Ranger badge and certificate. Read all the signs, and if you can't find the answers on the trails or in the museum, ask a ranger!**



If you are six years old or younger, do all of the pages marked with this pictograph of a handprint.



If you're between seven and 12 years old, do all of the pages marked with the pictograph and those marked with this trowel.



If you're 12 years old or older, do all of the pages in the book—those marked with the pictograph, the trowel, and this arrowhead.

Can you guess why the emblem of the National Park Service is an arrowhead? See if you can figure it out!

The bison means rangers protect: **ANIMALS**

The tree means rangers protect: **PLANTS**

The mountain means rangers protect: **THE LAND**

The lake means rangers protect: **THE WATER**

The arrowhead means rangers protect: \_\_\_\_\_





**Pottery is very important to archeology in the Southwest. By looking at pieces of pottery, archeologists can tell who made it, where it was made, and about how old it is.**

Look carefully at these pots and circle the ones that are exactly alike. There may be more than one pair!



**What would happen if someone took away all the ancient objects from a prehistoric place like Tuzigoot? Could archeologists still learn about the people who lived here?**

**An archeologist helps us learn about the past by studying things left behind by people who lived long ago. See how many of these places you can find while visiting Tuzigoot.**



Scavenger Hunt!	Where did you find this place?	What do you think the Sinagua used it for?
		
		
		<p>Hint: the place, not the viewing platform!</p>
		
		

**Remember!** As a Junior Ranger, you help us preserve the national parks, including their archeology. Protect what you see in the park by always staying on the trail and leaving everything exactly as you find it. It is very important to leave artifacts right where they are. **Why do you think that is?**

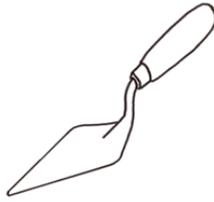
**Archeologists learn about ancient people by studying the artifacts they left behind.**



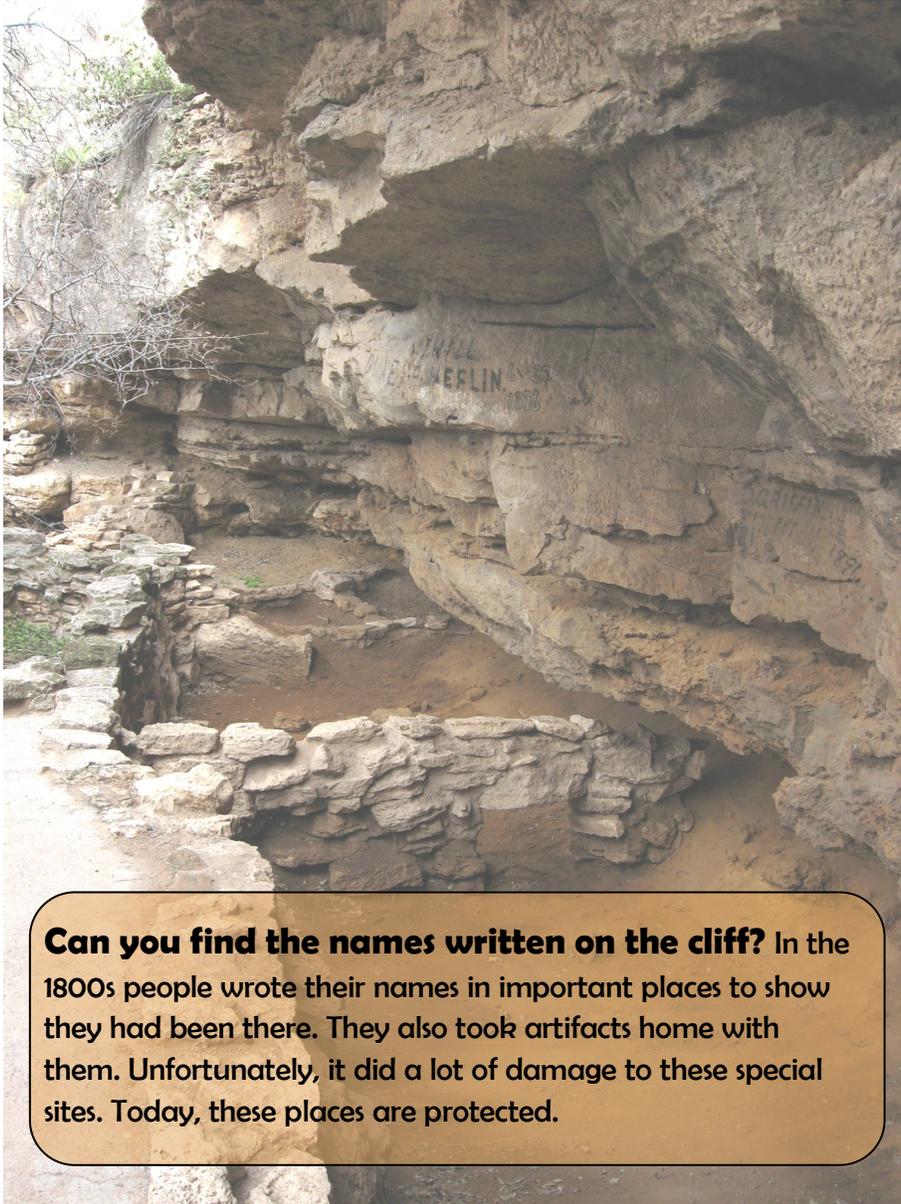
**Sometimes they find artifacts laying right on top of the ground. Other times the artifacts are under the ground, and archeologists have to look for clues to know where to dig for them.**

**An archeological dig is called an excavation. Help archeologist Sarah find just the right place to start looking for artifacts!**

A composite image consisting of three parts. In the top left is a portrait of a woman with long brown hair wearing a blue polo shirt. The background is a landscape of rocky terrain with sparse vegetation and hills in the distance. Overlaid on the lower-left portion of this landscape is a black maze. In the bottom right corner is a smaller inset photo of a person wearing a grey shirt and a cap, kneeling and working at an excavation site with a shovel.

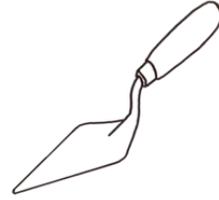


**What's wrong with this picture of Montezuma Well? Look closely at the picture below and circle what shouldn't be there.**



**Can you find the names written on the cliff?** In the 1800s people wrote their names in important places to show they had been there. They also took artifacts home with them. Unfortunately, it did a lot of damage to these special sites. Today, these places are protected.

**Why do you think it's important to protect places like Tuzigoot National Monument?**



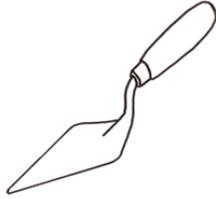
*Think about your life today. What things do you use every day that archeologists of the future may find in their excavations? Write a list or draw them here.*

*Imagine that future scientists were trying to piece together the story of your life from artifacts you leave behind. How much would they be able to learn about you if some of those things were taken away?*



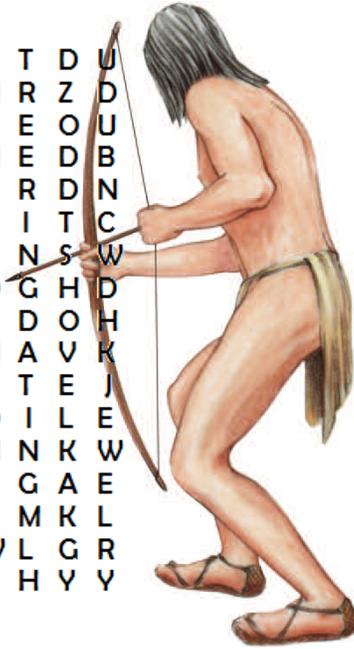
The more artifacts are missing, the less archeologists can learn about the people who left them behind.

But, if we leave things exactly where we find them, archeologists will someday be able to understand the clues they hold about people of the past!



**How old is it?** Archeologists have developed many creative (and hard-to-pronounce) ways to figure out the age of items they excavate. See if you can find them in the word search below.

K	D	Y	H	B	T	D	S	D	L	T	D	P	F	T	D	U
A	K	N	M	O	Q	L	I	R	P	N	B	U	N	R	Z	D
J	Z	X	G	S	F	F	P	O	T	T	E	R	Y	E	O	U
Y	G	O	L	O	N	O	R	H	C	O	R	D	N	E	D	B
O	W	O	J	L	S	D	G	V	S	M	F	U	C	R	D	N
C	A	R	B	O	N	D	A	T	I	N	G	T	B	I	T	C
M	A	U	P	S	H	J	M	E	T	A	T	E	D	N	S	W
O	R	S	Y	W	Z	U	Q	X	O	T	N	N	O	G	H	D
L	T	E	D	L	A	D	N	A	S	K	C	F	U	D	O	H
A	I	R	E	X	C	A	V	A	T	I	O	N	N	A	V	K
N	F	I	A	R	C	H	E	O	L	O	G	I	S	T	E	J
M	A	A	A	X	F	T	H	A	D	A	X	K	O	I	L	E
A	C	T	Y	T	O	X	Z	X	X	N	S	G	H	N	K	W
N	T	I	P	U	M	Z	K	C	S	U	U	T	K	G	A	E
O	T	O	O	S	N	X	Z	T	R	O	W	E	L	M	K	L
J	X	N	M	Q	B	M	Q	R	O	G	V	N	W	L	G	R
D	Z	N	D	S	T	R	A	T	I	G	R	A	P	H	Y	Y



- **STRATIGRAPHY** is all about layers! Archeologists know that in most cases, the deeper they dig, the older the artifacts get.
- **TREE RING DATING** tells archeologists how old something is by the growth patterns of wood used in ancient buildings.  
**DENDROCHRONOLOGY** is a fancy name for the same thing.
- **SERIATION** lets archeologists date things by changes in style. Think of how cars today look different from old cars your grandparents might have driven. That's seriation!
- **CARBON DATING** uses a chemical element that's in all living things—including you!—to tell how old it is.

**What other archeology words can you find above? Hint: look for words in this activity book that are underlined.**

Give it a try...

# DENDROCHRONOLOGY



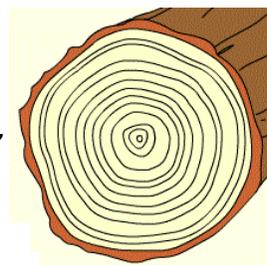
What on Earth is dendrochronology?

<b>DENDRO-</b>	means	<b>TREE</b>
<b>-CHRONO-</b>	means	<b>TIME</b>
<b>-OLOGY</b>	means	<b>STUDY</b>

**Dendrochronology is the study of time using trees!**

You probably already know that trees add new rings every year. In wet years, the rings are wide, because the tree grows a lot. Trees don't grow much when it's dry, so the rings are narrow those years.

Since weather is different every year, all the trees in a region have the same growth pattern, and that pattern is never repeated.

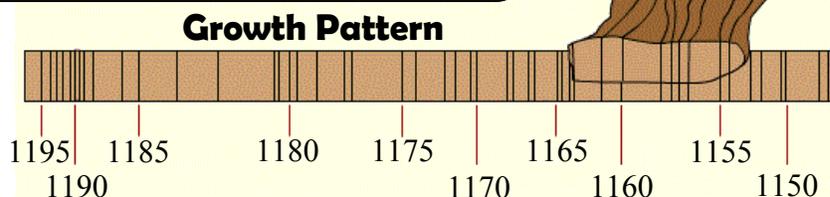


Archeologists keep records of growth patterns reaching hundreds of years into the past. When an archeologist excavates something made from the right kind of wood, he or she can compare that to the patterns we know and estimate the age of that artifact!

**About how old is this axe? \_\_\_\_\_**

**What kinds of things do you think the Sinagua made from wood?**

**Axe Haft**





# BIG MYSTERY!

When it comes down to it, an excavation is a lot like reading a mystery novel. Every artifact is a clue, but what does it all mean? The archeologist's job is to try to figure that out.



**Do you have what it takes?** Look at the list of artifacts below. If you were an archeologist here at Tuzigoot and excavated these items, what might you think about the people who left them behind?

- pieces of pottery
- a sandal made of yucca
- sea shells
- turquoise jewelry
- a mano and metate
- a pot full of dried corn
- a woven basket
- an axe haft from 1163



**Write your answer here—**



**Bonus question!** What information would be lost about the people who lived here if someone took away the axe haft? What clues would be lost if someone took away the sea shells? How about the other artifacts?

Park rangers and archeologists protect America's special places for the enjoyment, education, and inspiration of this and future generations—including their history and the artifacts that tell their stories!



**ACROSS**

- 2 The Junior Ranger Motto: Explore, Learn, \_\_\_\_\_
- 6 What the Sinagua made from turquoise and shells
- 8 Carrying water to farms using ditches
- 10 Aztec emperor some Sinagua sites are incorrectly named for
- 11 A kind of very early house dug into the ground
- 12 What archeologists use to date trees

**DOWN**

- 1 A flat stone for grinding corn
- 3 Dating artifacts based on their style
- 4 Clay containers often found in prehistoric sites
- 5 A major food source farmed by the Sinagua
- 7 An archeological dig, sometimes with a shovel
- 9 A chemical element found in all living things

# JUNIOR ARCHEOLOGIST PLEDGE

**As a Junior Archeologist, I promise:**

- **To always leave artifacts and other objects where I find them,**
- **To treat ancient places with respect,**
- **To learn more about archeology and history in national parks, and**
- **To share what I learn with my family and friends.**



## **One last thing!**

Want to know more about archeology?  
Check out these web sites with a grown-up:

<http://www.nps.gov/webrangers/> and

<http://www.nps.gov/archeology/public/kids/>