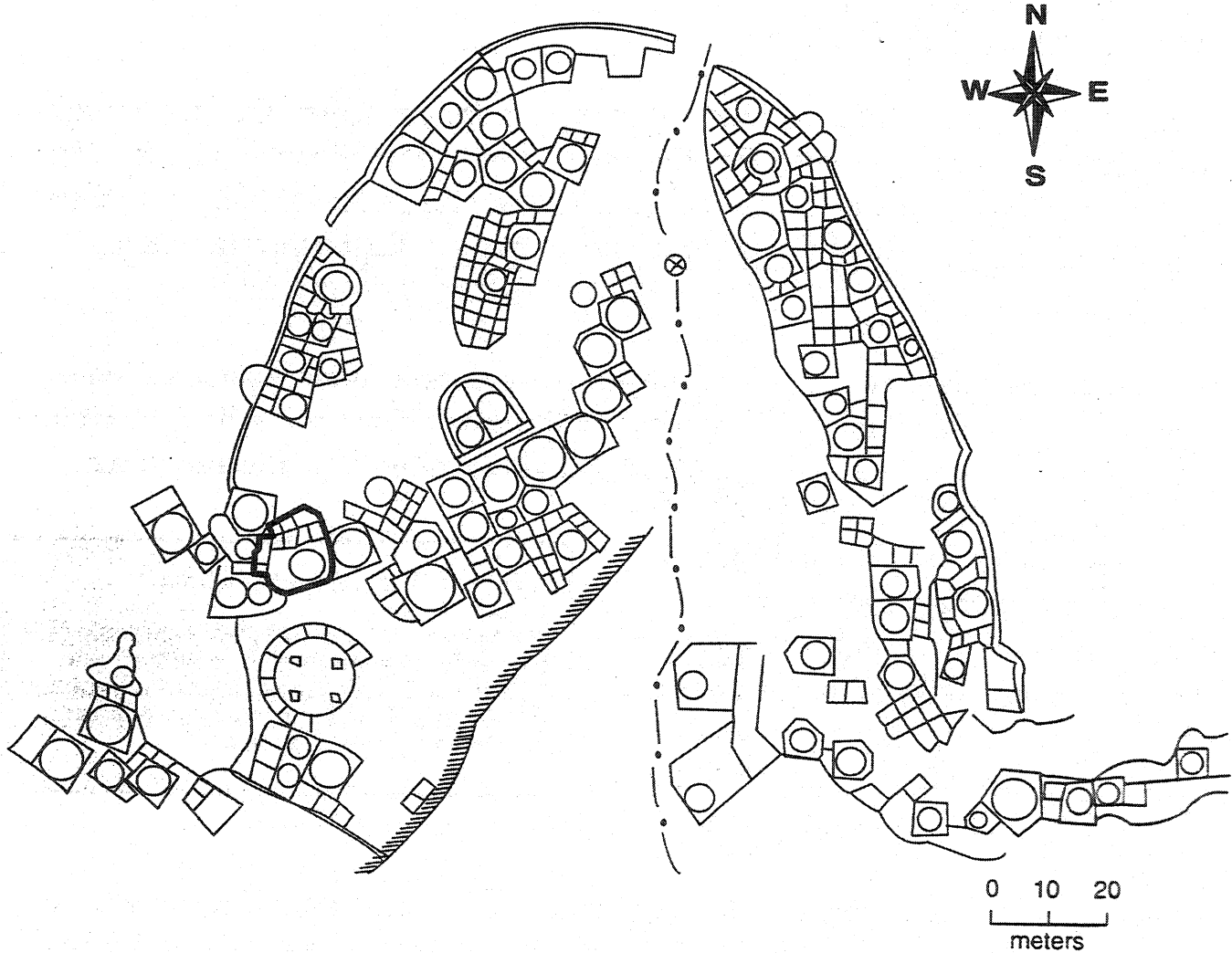
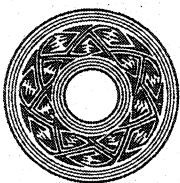




# ARCHAEOLOGISTS USE MAPS



SAND CANYON PUEBLO, A.D. 1250



CROW CANYON ARCHAEOLOGICAL CENTER

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# Archaeologists Use Maps



Have you ever wondered about people who lived in the past? Archaeologists learn about people who lived in the past by studying the buildings, tools, and trash that the people left behind. Archaeologists draw maps to record the locations of the things they find.

Archaeologists draw different kinds of maps at different scales. One map might show a single room in a house. Another map might show the whole house. Yet another could show many houses that make up a village. And finally, on a very large scale, a map might show the locations of many villages throughout an entire region.

When archaeologists try to answer questions about how ancient peoples lived, they have to decide which kinds of maps will provide them with the best information. For example, if an archaeologist wanted to know how the ancestral Pueblo people cooked their food, he or she would look at maps of individual rooms that contained cooking tools and fire pits. But if an archaeologist wanted to know where most ancestral Pueblo people lived, he or she would use a map of the entire region showing where all the villages were located.

**A.D.** A date in years after Christ.

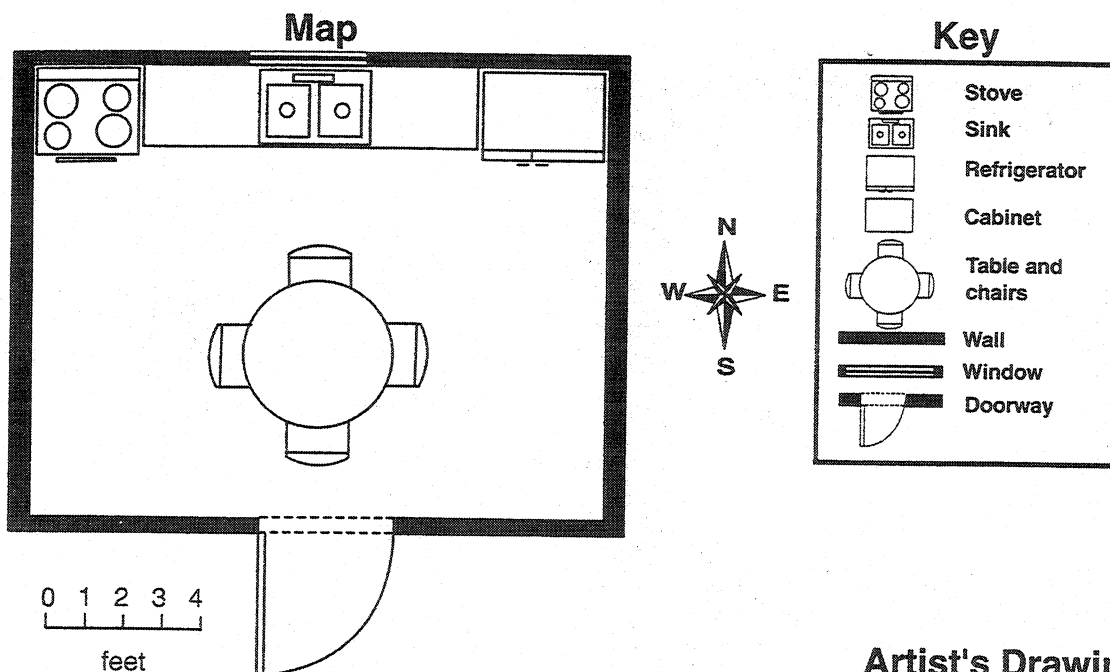
**ancestral Pueblo people.** Ancestors of the modern Pueblo Indians who live in Arizona and New Mexico today. Sometimes the ancestral Pueblo people are referred to by the Navajo term *Anasazi*.

Archaeologists at the Crow Canyon Archaeological Center study the ancestral Pueblo people who once lived in southwestern Colorado. These archaeologists excavated a large village called Sand Canyon Pueblo, which was occupied in A.D. 1250.

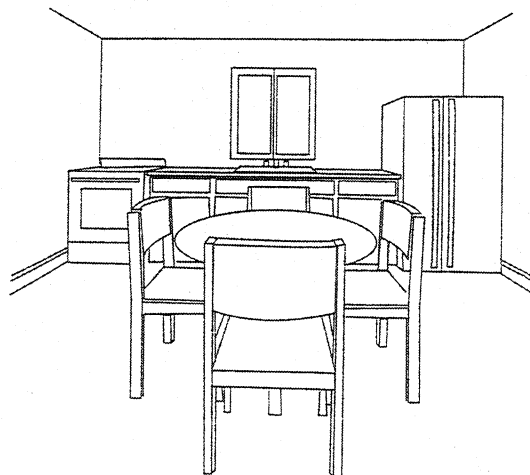
As you work through this book, you will first use a map of a room that is familiar to you so that you can review your map-reading skills. Then you will use maps of Sand Canyon Pueblo and southwestern Colorado, drawn at different scales, to collect information and answer questions about ancestral Pueblo people.



This is a map of a room in a typical modern American house. Archaeologists use information about a room's size and its contents to make interpretations about how the room was used. Archaeologists also use artists' drawings to recreate how a room or building may have looked.



Artist's Drawing



1. Color each symbol in the key a different color. Then color each item on the map the same color as its symbol in the key.

2. Draw a line between the stove symbol on the map and the stove in the artist's drawing.

3. Use the scale to measure the room inside its walls.

East-west dimension \_\_\_\_\_ North-south dimension \_\_\_\_\_

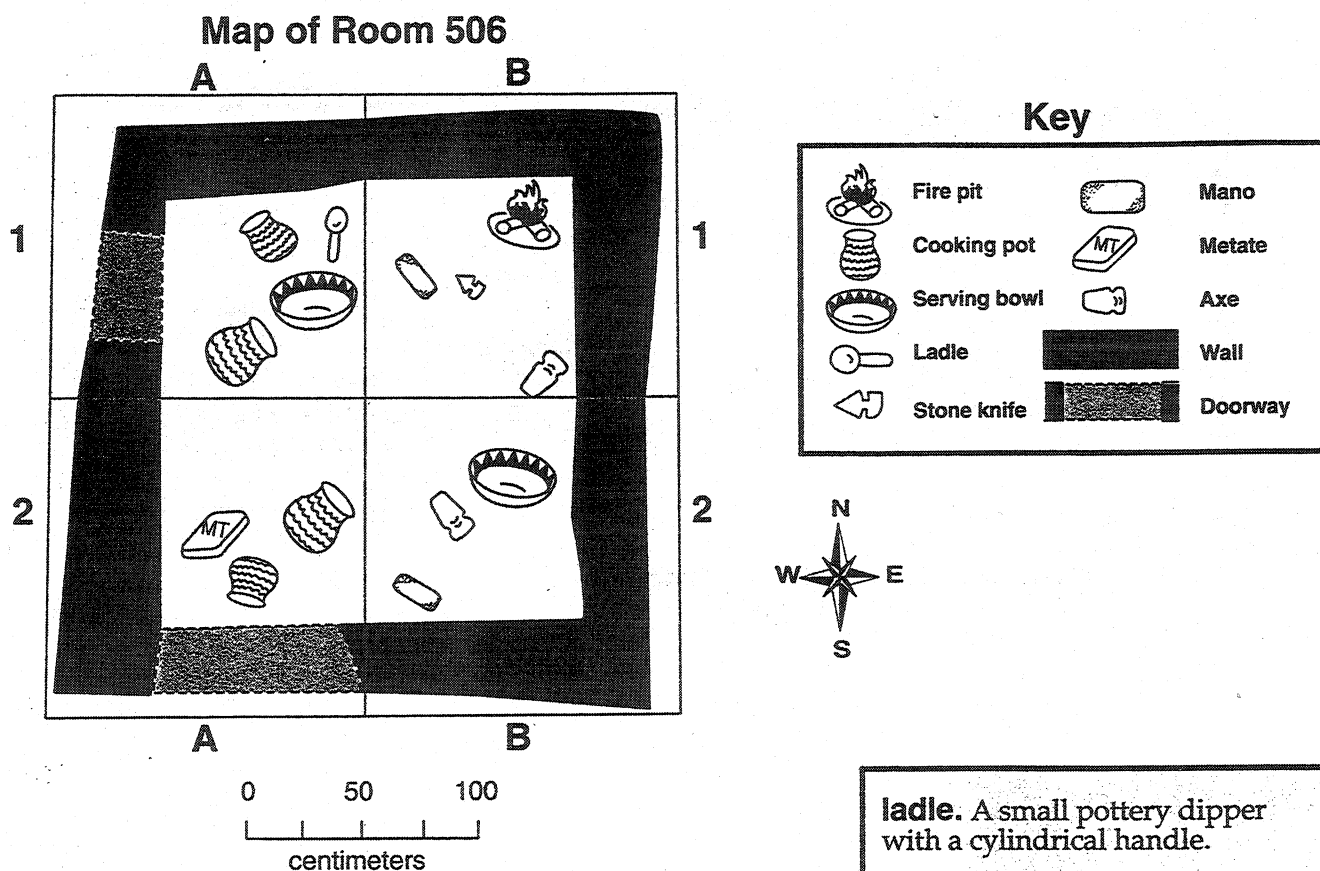
4. How many people can be seated at the table? \_\_\_\_\_

5. How do you think people use the room shown in this map? \_\_\_\_\_

\_\_\_\_\_

# An Ancestral Pueblo Room

This is a map of Room 506 at Sand Canyon Pueblo, which was occupied in A.D. 1250. The map is divided by a grid. Grid lines help archaeologists draw maps, and they help users find points of interest on maps. Archaeologists use the metric system to create and use maps.



**ladle.** A small pottery dipper with a cylindrical handle.

**mano.** A small, hand-held stone used to grind food on a metate.

**metate.** A large grinding stone used with a mano to grind food.

1. Use the scale to measure the room inside its walls.

East-west dimension \_\_\_\_\_

North-south dimension \_\_\_\_\_

2. Using the key, list what was found in each grid square.

**Grid Square**

**What was found?**

1A	_____	_____	_____
2A	<u>metate</u>	<u>cooking pot</u>	<u>cooking pot</u>
1B	_____	_____	_____
2B	_____	_____	_____

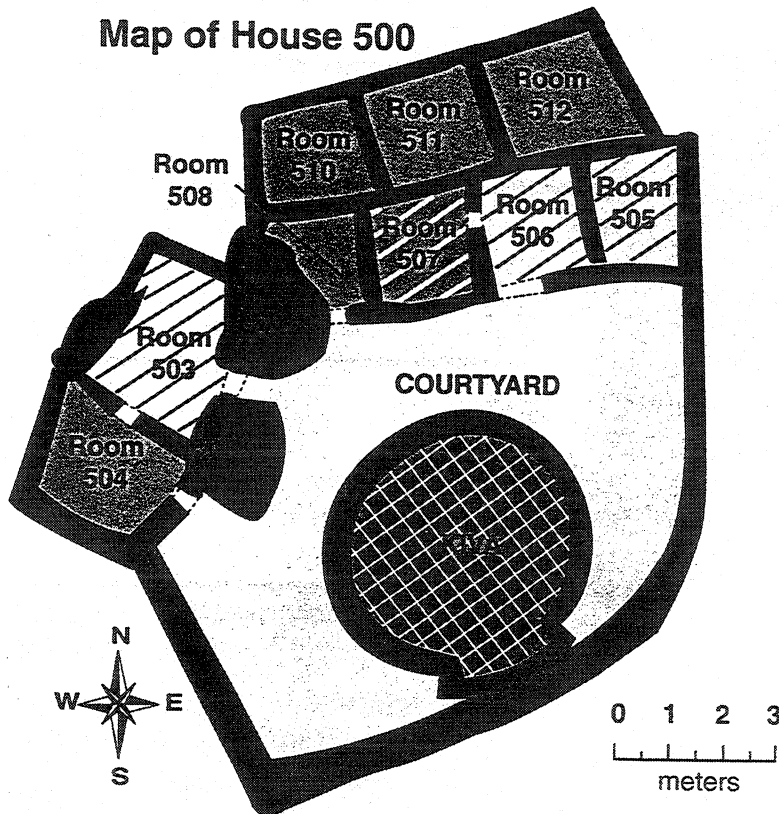
3. Explain how you think ancestral Pueblo people used Room 506, and tell how you reached your conclusions. \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

# An Ancestral Pueblo House

This map shows House 500 at Sand Canyon Pueblo, a typical ancestral Pueblo house occupied in A.D. 1250. It has rectangular rooms, a small courtyard, and a circular room, or kiva, built below ground. This house was home to a family, which may have included children, their parents, and other relatives. By observing the items found in the rooms, the kiva, and the courtyard, archaeologists identified where this family cooked its food, stored its possessions, made tools, and held religious activities. Use the key to discover which activities took place in which spaces.

**courtyard.** An outdoor space within a house.

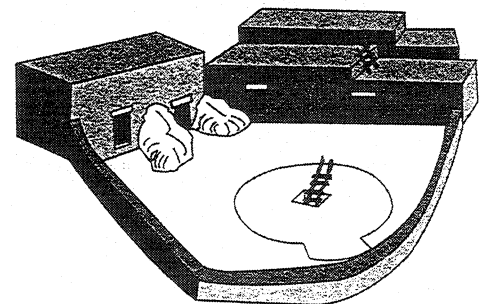
Map of House 500



Key

	Cooking		Cooking, storage, and religion
	Storage		Wall
	Religion		Doorway
	Tool making and cooking		Boulder

Artist's Drawing

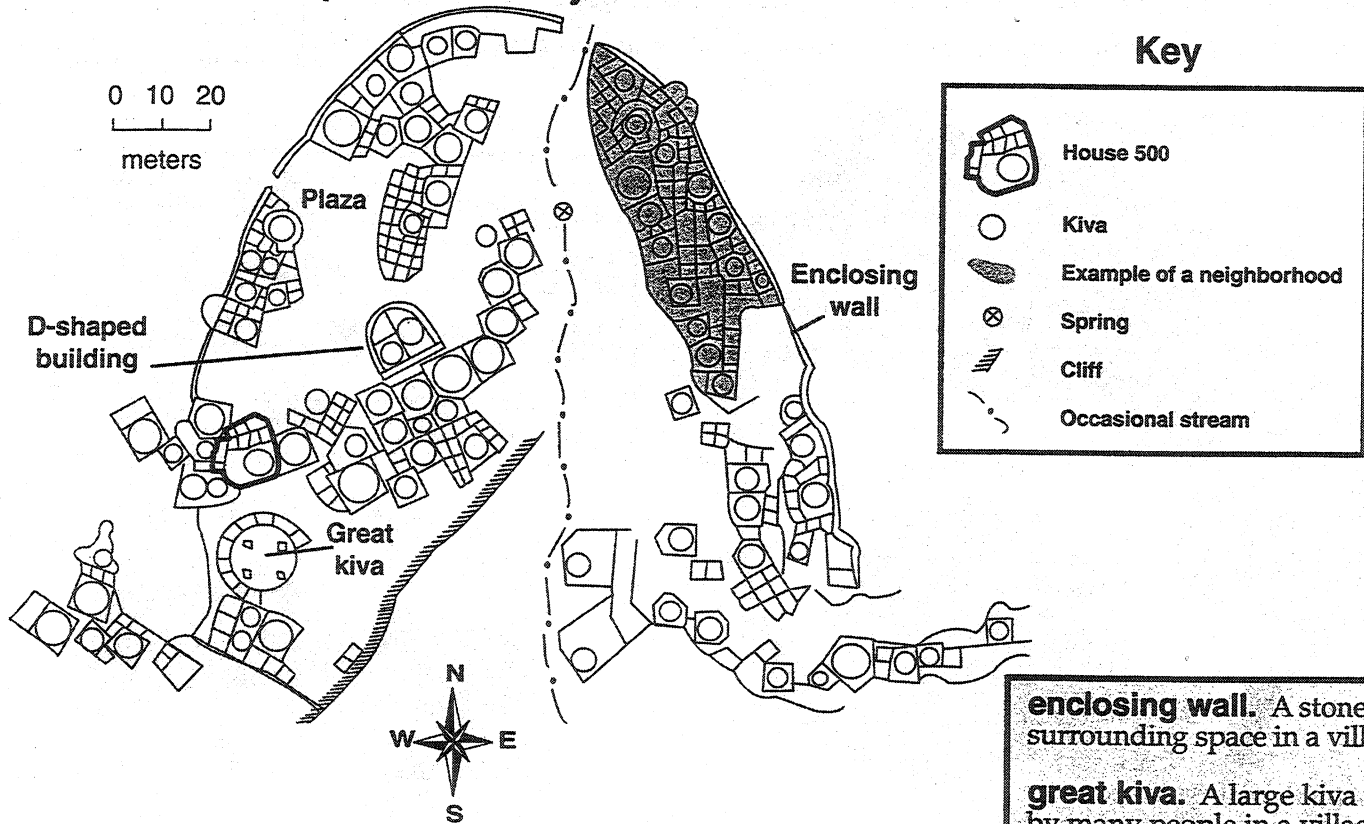


- Which activity took place in Room 511? \_\_\_\_\_ In Room 507? \_\_\_\_\_
- Where did cooking, storage, and religious activities take place together? \_\_\_\_\_
- Which activities took place in the courtyard? \_\_\_\_\_
- What is the east-west diameter of the kiva inside its walls? \_\_\_\_\_
- Archaeologists estimate that *the number of people in a family is equal to the number of rectangular rooms in their house*. Using this formula, calculate how many people lived in House 500.  
\_\_\_\_\_  
\_\_\_\_\_
- Where do you think the family spent most of its time? Why do you think so? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# An Ancestral Pueblo Village

Throughout most of their history, ancestral Pueblo people lived on small family farms. Around A.D. 1250, many of them built their houses in villages of 50 or more rooms. Sand Canyon Pueblo was a village with many houses and public spaces, such as a great kiva, an enclosing wall, a plaza, a D-shaped building, and a spring from which everyone got their water.

**Map of Sand Canyon Pueblo**



**enclosing wall.** A stone wall surrounding space in a village.

**great kiva.** A large kiva used by many people in a village.

**occasional stream.** A waterway that contains water only part of the year.

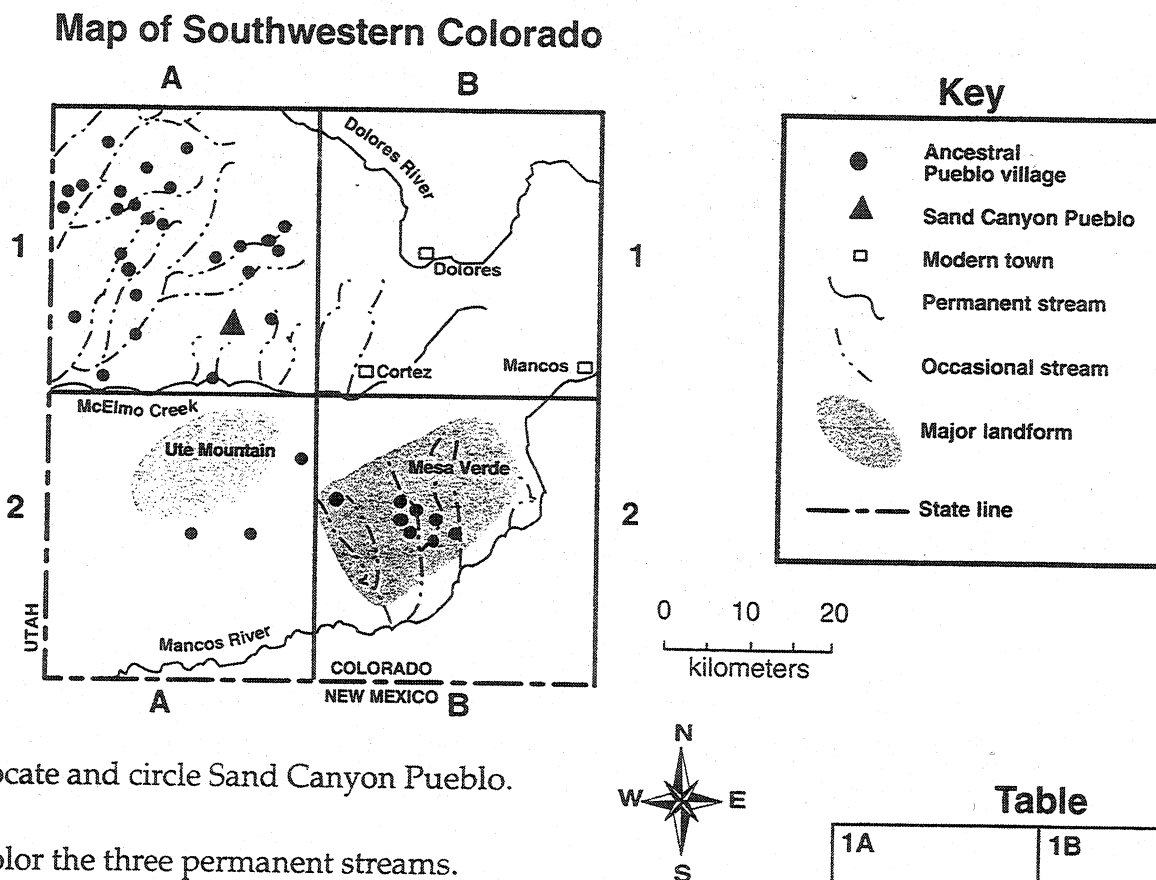
**plaza.** A large outdoor space in a village.

1. Use the key to find House 500. Color it in.
2. Put an X on the map where you find the public spaces that are listed in the paragraph above.
3. How far is the spring from the middle of House 500? \_\_\_\_\_
4. Which direction is House 500 from the spring? \_\_\_\_\_
5. Circle the neighborhood that is located east of the spring. Count the kivas in the neighborhood you circled. If each family had a house with one kiva, how many families lived in this neighborhood? \_\_\_\_\_
6. Why do you think so many ancestral Pueblo people chose to live in this village rather than on single-family farms? \_\_\_\_\_

# Ancestral Pueblo Villages of Southwestern Colorado

7

This is a regional map of southwestern Colorado that shows the locations of all the villages that were occupied in A.D. 1250. As you can see, the villages were not spread evenly across the landscape. Some areas had many villages, while other areas had no villages.

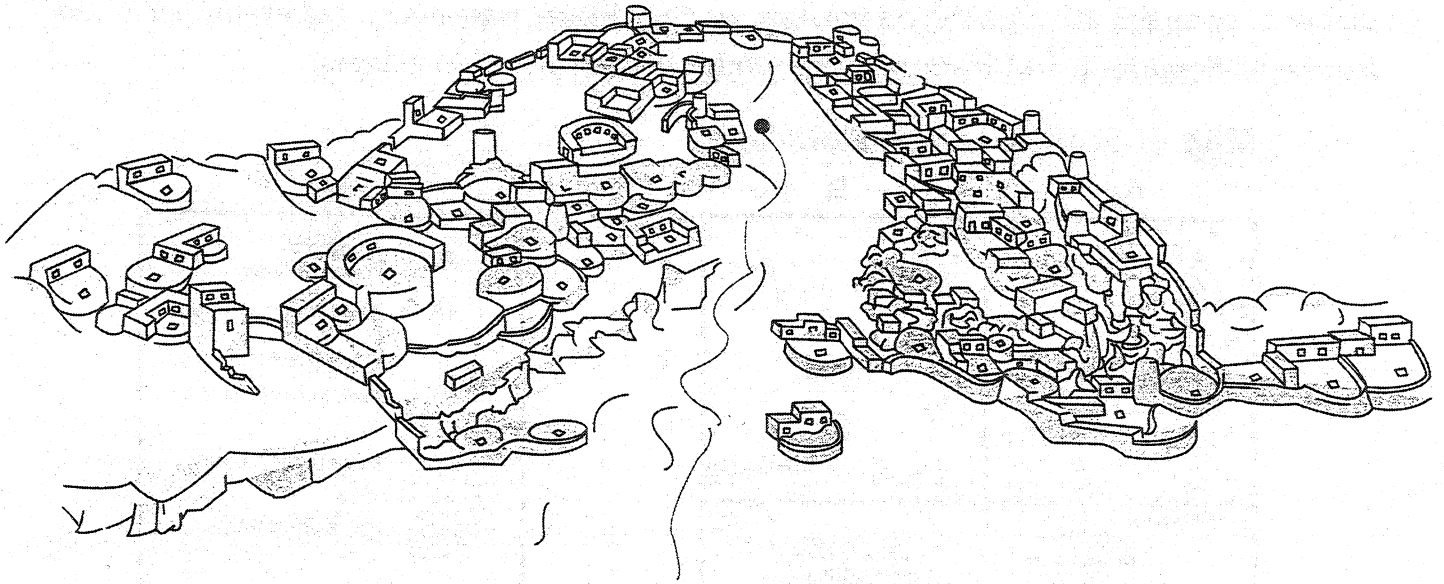


1. Locate and circle Sand Canyon Pueblo.
2. Color the three permanent streams.
3. Count the villages in each grid square, and enter the number in the matching square on the table to the right.
4. Which grid square contains no ancestral Pueblo villages? \_\_\_\_\_  
Which grid square contains the most ancestral Pueblo villages? \_\_\_\_\_
5. Find the village that is farthest north in grid square 1A. Label it N.  
Find the village that is farthest south in grid square 2B. Label it S.  
What is the distance between those two villages in kilometers? \_\_\_\_\_
6. Were most of the villages located north or south of McElmo Creek? \_\_\_\_\_
7. If you were an archaeologist, what question would you like to ask about ancestral Pueblo people that could be answered using a map? \_\_\_\_\_  
\_\_\_\_\_
8. To answer your question, would you use a map of a room, a house, a village, or a region? Why? \_\_\_\_\_  
\_\_\_\_\_

**Table**

1A	1B
2A	2B

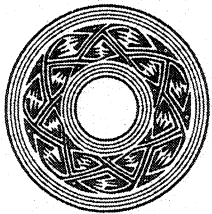
## Artist's Drawing of Sand Canyon Pueblo, A.D. 1250



Archaeologists collect information to get answers to their questions. If modern people disturb the sites of people who lived before us, the evidence becomes too mixed-up to be useful.

Ancestral Pueblo villages are important historical sites to the Pueblo Indians who live today in Arizona and New Mexico. They are also an important part of our nation's history and deserve the same respect as other historic sites like the Washington Monument, the Lincoln Memorial, and the Statue of Liberty.

What can you do to protect ancestral Pueblo sites and history in southwestern Colorado?



**CROW CANYON ARCHAEOLOGICAL CENTER** is an independent, not-for-profit center for archaeological research and education.

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Prepared by Cynthia S. Bradley, Ricky R. Lightfoot, and Patricia M. Wheat.

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Layout and graphics by Lisa Snider, Concepts and Images, Durango, Colorado.

Printed by Basin Printing and Imaging, Durango, Colorado.





## ARCHAEOLOGISTS USE MAPS

This booklet's primary purpose is to reinforce map skills to learn more about the ancestral Pueblo people. It is also a window into the world of archaeology. Everything that the student will do is something an archaeologist does on a routine basis.

Although it is not explicitly stated, the scientific/archaeological process of asking a question, making observations, then forming an inference or conclusion underlies the format of this book. Accordingly, the initial questions on a page have specific answers. The last question on each page is designed to have the students integrate their observations to form a conclusion. Since human behavior is not necessarily apparent or straightforward (even to archaeologists!), the students answers may vary, depending upon the map evidence that they choose to use or emphasize. You might tell your students that this diversity of opinion is as much a part of archaeology as excavation—as long as there is some basis in fact. An exception to this are questions 7 and 8 on page 7, which are "closure" questions for the entire booklet.

We have tried to use math concepts and skills that have been previously introduced and will be used or emphasized in the fourth grade. We realize that fine motor skills for fourth graders are variable and may affect a student's ability to use a scale accurately. So, none of the concluding questions will depend upon a student's measurement of a map. Also, sometimes a measurement will not fall on a scale's mark exactly. This is one of the drawbacks of using an archaeological map. In cases like this, archaeologists estimate, round up, or give a range. You can decide depending upon what math concept you want to emphasize.

### ANSWERS Page 3

1. Archaeologists really do use color on maps to sort out information!
- 2.
3. E/W 15 feet , N/S 11.5 feet (Sorry it's not exact-the wall widths are not as uniform as we expected!)
4. 4
5. Most likely -Kitchen, dining room. In their reports, archaeologists always use complete sentences!

### Page 4

1. on grid lines: E/W 175 centimeters , N/S about 190 centimeters, range 175-200 centimeters
2. 1A: cooking pot, cooking pot, ladle, serving bowl
  - 1B: firepit, stone knife, mano, axe
  - 2B: mano, axe, serving bowl
3. Probably a kitchen but could also have been used for storage.

Page 5

1. storage , religion
2. kiva
3. tool making and cooking
4. 4 meters
5. number of people = number of rectangular rooms  
number of people= 9
6. open question, most likely the courtyard or kiva—(not men only!)

Page 6

- 1.
2. The enclosing wall surrounds most of the site. It was only a little over 1 meter high, 1/2 meter wide, and was apparently not defensive. It probably had a civic/ritual purpose, as did the D-shaped building, the plaza, the great kiva, and possibly even the spring.
3. 80 meters
4. SW
5. 14 kivas, 14 families
6. open question. Being closer to water and civic/ritual spaces, having enough people to build civic/ritual spaces, being closer to their friends and families. Mutual protection was also a possibility, but there is no evidence for it (see note on enclosing wall.)  
This ties into the 4th grade social studies emphasis on communities.

Page 7

3. 1A 27 1B 0  
2A 3 2B 8
4. 1B, 1A
5. 80 kilometers (48 miles)
6. north

Questions 7 and 8 are closure questions that reconnect the student to the discussion of maps on page 2. They are asked to determine whether the student understands the need to select a map of appropriate scale for a