

WHAT BONES TELL US

Mark It on the Map

Hang a world map in the classroom. As students read the articles, have them label the following places on the map: **New Mexico** (Folsom), **Mexico** (Mexico City), **Peru** (Chan Chan), **England** (Piltdown), **Russia** (Siberia), **China**, **South Africa**.

Introduction

Have students read aloud “What Bones Tell Us About the Past” on pages 4–9. Ask whether anyone has seen an animal skeleton. Have the student tell where he or she saw the skeleton, what type of animal it was from, and how old it was. Ask whether anyone has seen a human skeleton. Have the student tell where he or she saw it, whose skeleton it was, and how old it was.

Vocabulary

amateur	relic
<i>calaca</i>	<i>calavera</i>
cultural patrimony	diviner
extinct	forgery
hoax	maize
osteoporosis	red marrow
repatriation	skeleton
squatting facet	vertebra

Questions for Discussion

- Why do bones survive for centuries, while the rest of the body does not?
- How do scientists use excavated bones to find out how a person lived and what he or she did for an occupation?
- What can excavated bones tell us about a person’s diet?
- How were oracle bones used during China’s Shang dynasty?
- Why were some scientists skeptical about the authenticity of the Piltdown skull? How did tests prove that the skull was a fake?
- How did some ancient people on islands off the coast of Siberia use bones in the construction of their homes?
- During the early 1900s, what were the two schools of thought about when people first arrived in America? How did excavated bison bones resolve this difference?
- Who were the Folsom people? When and where did they live?
- How were Folsom spear points made?
- How does a U.S. law concerning repatriation of human remains and objects affect Native Americans?
- What is the purpose of *calacas* in Mexico?
- How and why do Mexicans use *calaveras* to celebrate the Day of the Dead?

Writing Workout

Students may complete one or more of the following activities:

- Read the sayings on page 10. Choose a saying and explain how and why some variation of the word “bone” is used in each. Give examples to support your reasoning.
- Describe the type of *calavera* design that you think would best fit you.
- Write an essay explaining what the clever weaver’s request says about his personality.

Viewpoints

- After students read about the Piltdown skull, divide them into three groups. Have each group come up with a reason someone would take the time to create such a forgery. Then have a spokesperson from each group present this opinion. If there is time, have the three groups debate the merits of each theory.
- Divide students into groups. Have each make a chart listing the types of objects they believe should be repatriated to Native Americans and why. After all the groups have completed the task, hang their charts on a bulletin board or wall and encourage the groups to discuss them.
- Divide the class into two groups to debate the following statement: Poking fun at death helps people to feel more comfortable about a fact of life that we all will experience.

Then and Now

By studying excavated and fossilized bones, scientists are able to discover the type of work ancient people did and how they lived. Information about various periods in history help scientists to draw these conclusions. Think of your lifestyle and the type of work you and your parents do. Are your bones apt to be affected? What do you think scientists two thousand years from now will know about you from your bones? What information about today's society will help them understand your bones?

Get Into Art

Students may complete one or more of the following activities:

- Make a bird bone whistle by following the directions on page 27.
- Form a group and have each member draw a *calavera* with an explanation of what it represents. Display these drawings and captions on a bulletin board or wall in celebration of November 2, the Day of the Dead in Mexico.
- Make your own funny bones and neck bone beads by following the directions on page 11.
- Make your own oracle bones by following the directions on page 13. Notice the suggestions for ways to use these bones.

Look Around You

- Make an appointment to have the class visit a natural history museum. If possible, arrange to have a museum guide. Visit the sections devoted to prehistoric societies. Have students look at the models and replicas of artifacts from these societies and examine the scenes depicting life at the time. Ask the guide to explain how the finds led to the creation of the scenes.
- Arrange to visit a natural history museum or local history museum that has artifacts dating to time periods before the 1600s. Examine the tools used during those periods. Look for examples of flint knapping. Compare exhibited spear points and have students explain the differences and similarities between the points.

Research Projects

Students may complete one or more of the following activities:

- Research the muscles used by athletes, then draw or cut out pictures of athletes in different sports. Use a separate sheet of paper to draw or mount the picture of each athlete, then mark the muscles and bones affected after years of use.
- Research the Shang dynasty in China (c. 1766–1122 B.C.) and the use of oracle bones. Find out how scientists first learned about these bones.
- Research the oldest human skull found to date. Find out who discovered it and where, and describe the culture in which the person lived.
- Research Charles Darwin and his theory of evolution.

Just for Fun

- To celebrate the Day of the Day, November 2, have each student bring in a cupcake decorated with colored frosting or candies to commemorate this day. At snack time, recess, or lunch, have each student explain his or her creation, then let students take turns picking one of the cupcakes to eat.
- On a prearranged evening, have student volunteers make the milk shake on page 9 and drink it half an hour before bedtime. The next morning, have them compare notes on how the shake tasted and how well they slept.

Follow These Footsteps

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