

# MAGS EXPLORER



Memphis Archaeological and Geological Society Youth Newsletter

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## The Dog and the Prehistoric Indian

Some archaeologists think that men and arctic wolves discovered the benefits of living close to each other about 14,000 years ago.

Wolves were scavengers for men, and in exchange men gave the wolves their leftovers. From this partnership a breed of dogs developed and spread throughout Europe and Asia, and then America. No one knows when dogs first appeared in North America. Until recently, the oldest dog bones found in North America were dated at about 5100 B.C. Two research teams [one studying dog origins in the Americas, and one studying dog origins in Europe and Asia] suggest that domesticated dogs first appeared in East Asia 40,000-50,000 years ago, spread across Asia and Europe, and then accompanied their two-legged companions into the New World 12,000-14,000 years ago.

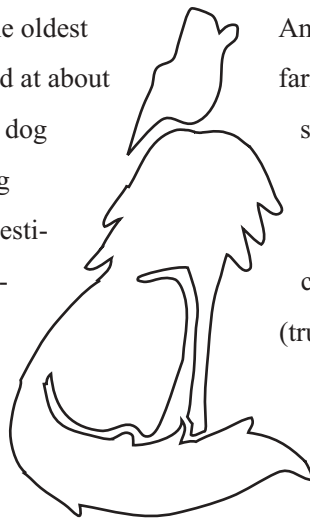
Dogs may have helped hunters track game. No one is sure about this, but there is no doubt that dogs were companions for adults and playmates for children. Before they were ever used for hunting, dogs had an important place in the religious ceremonies of some tribes. Sometimes dogs were buried with special honors. In the

Southwest and on the Northwest Coast, Indians raised special long-haired dogs and used the hair in weaving blankets and belts.



Dogs appeared throughout much of America, especially where men were hunters. In some farming areas archaeologists have found no dog skeletons at all. Wherever they existed, dogs were the most important domesticated animal, often the only domesticated animal. In the Plains area they carried loads on special pole frames called travois (truh-VOY).

In many places the earliest dogs were small. Later, dogs in the warmer parts of the continent were small, but farther north they were large, and the largest of all lived farther north.



2003 Wolf drawing by Mike Baldwin

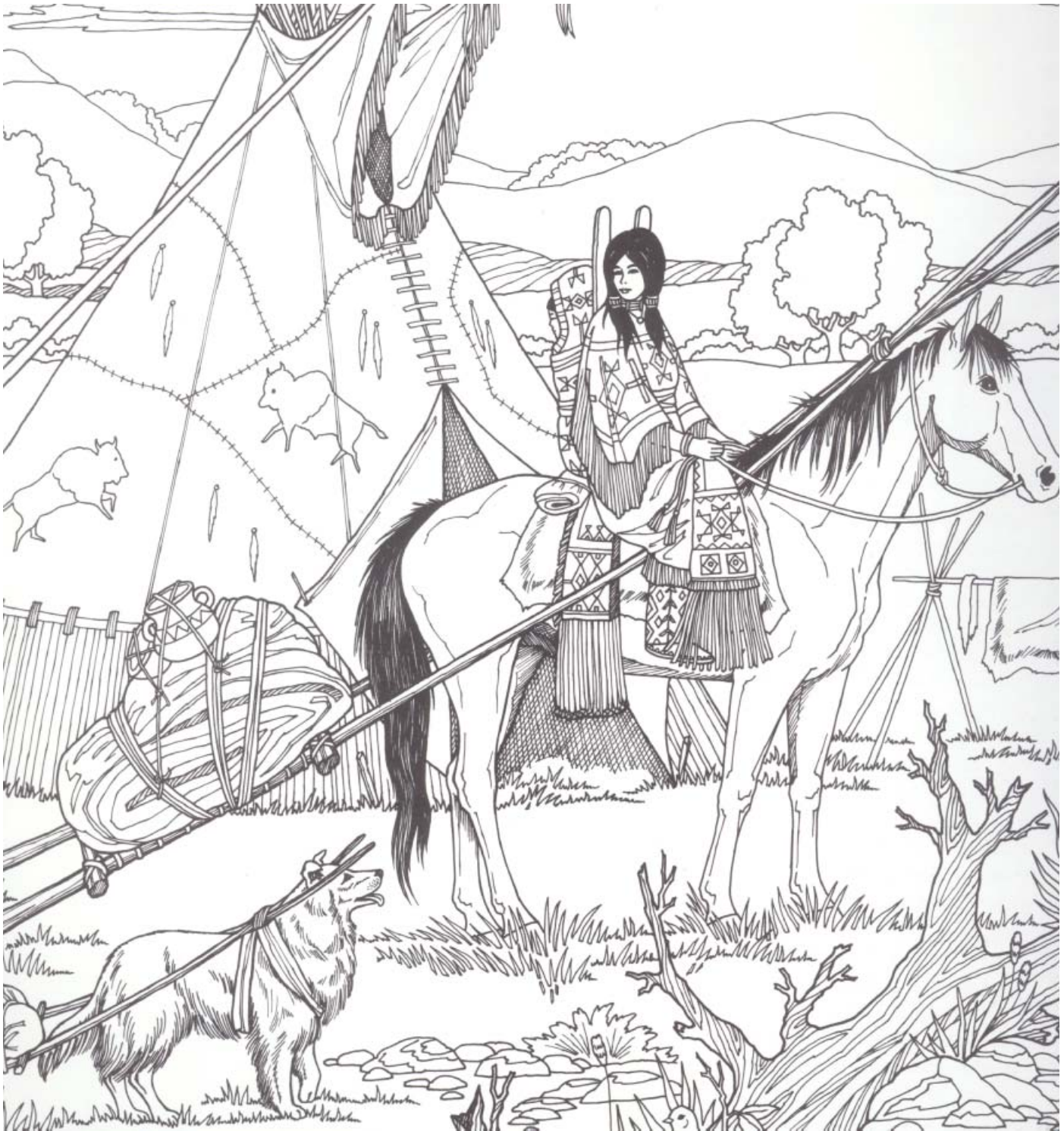
### Works Cited:

1. Franklin Folsom; *America's Ancient Treasures*; Rand McNally & Company; New York, New York; 1974.
2. Lisa Onaga; *Once big bad wolf, now man's best friend: Science studies trace dogs' origins*; American Association for the Advancement of Science; Press Release; November 21, 2002.

MAGS Explorer is published monthly by and for the youth members of the Memphis Archaeological and Geological Society. Please send your comments and articles to Editor Mike Baldwin, 367 N. Main St., Collierville, TN 38017 or rockclub@earthlink.net. Youth can give articles, artwork, poems, puzzles, experiments, or stories to co-editors Jennifer Baldwin, Emily Randolph, Kelly Baldwin, or Abbey Randolph.

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# COLORING PAGE



**SIoux** Indians used dogs to help them carry furs and food. Dogs used a special pole frame called a travois.

This page is from *North American Indians Coloring Book*, Rita Warner, Troubador Press, San Francisco, CA, 1978. Reprinted for educational purposes under the "fair use" provision of the U.S. Copyright Act.

# EARTH SCIENCE EXPERIMENT

## SAMPLER

**Purpose:** To demonstrate core sampling.

**Materials:** 3 different colors of modeling clay  
drinking straw  
fingernail scissors

**Procedure:** Do this before lunch.

- [1] Soften an egg-sized piece of each color of clay by squeezing in your hands.
- [2] Flatten the clay pieces, and stack them on top of each other to form a block and about 1 in. [2.5cm] deep.
- [3] Push the straw through the layers of clay.
- [4] Pull the tube out of the clay.
- [5] Use the scissors to cut open the straw.
- [6] Remove the clay plug.

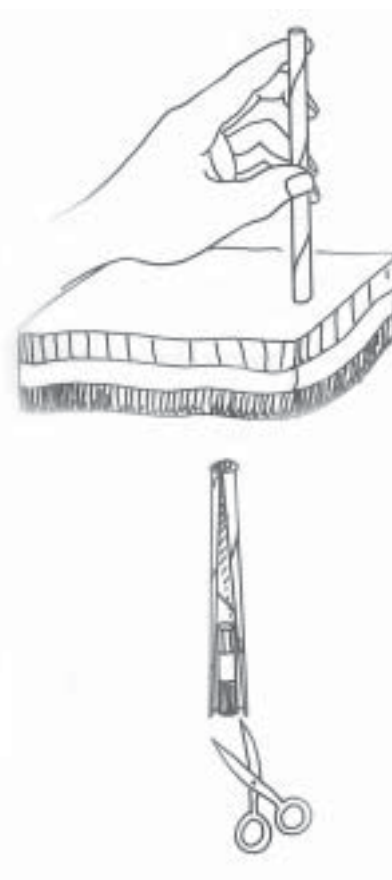
**Results:** The straw cuts a cylinder-shaped sample from the layered stack of clay.

**Why?** As the straw cuts through the clay, the clay is pushed inside the hollow. The captured clay is called a core sample, and it reveals what materials are layered inside the block of clay. Coring devices made of metal are used to cut through layers of soil just as the layers of clay were cut. The metal core sampler has a plunger that pushes the soil out so it can be studied.

Janice VanCleave, *Earth Science For Every Kid: 101 Easy Experiments That Really Work*; John Wiley and Sons, Inc.; New York New York; 1991. Reprinted for educational purposes under the "fair use" provision of the United States Copyright Act of 1976.

### WHAT'S THE MEANING OF THIS?

The word *fossil* comes from the Latin *fossillis*, meaning "dug up." A word for stone is *lithos*. So *gastroliths* are "stomach stones," while the "study of stones" is known as *lithology*. *Ology* means "study of." *Geo* means "Earth." So *geology* is the word for the "study of Earth." *Paleo* means "ancient" or "from the distant past, so *paleontology* is "the study of the past." *Botany* is the "study of plants, so *paleobotany* means the "study of ancient plants". *Zoology* is the "study of animals," so *paleozoology* is the "study of ancient animals."



## GARNET

Garnets are red.

Turn the page and cut out the Garnet Specimen Card for your collection.



# GEOLOGY CHALLENGE

## Fractures in the crust and mountain building

Mountain ranges are formed by the compression and distortion of previously low-lying rocks. Rocks that are subjected to intense force respond by either breaking or folding. Folding is possible when rocks which are normally quite brittle are subjected to heat and are put under high pressure. Plate movements are often slow enough to provide the time for folding to take place, but when the crust is too brittle or the plate movement is too fast for the rock to bend, breaking occurs. Different kinds of mountains result if the crust folds rather than breaks. The Appalachians, the Rockies, the Alps, and the Himalayas are all examples of mountains built mainly from the folding of rocks.

When rock folds, two distinct arrangements of folded layers are created: the anticline [upwards] and syncline [downwards]. Folds in rock layers can produce different features on surface landscapes, such as domes and basins. The processes that produce domes and basins are called the upwarping and downwarping of crustal rocks.

### CHECK IT OUT

Rocks fold when:

- [a] they are subjected to heat and high pressure over time
- [b] they are subjected to heat and high pressure quickly
- [c] they are covered by large bodies of water
- [d] plate movements are too fast

*Michael Bentley, High School Review: Earth Science; Princeton Review Publishing, L.L.C.; New York New York; 1998; pg. 32.  
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## January Field Trip

### Reelfoot Lake, Tennessee

January 18, 2003 is the date set for the MAGS Field Trip to Reelfoot Lake to watch the eagles. Reelfoot is a fascinating place. The lake was created in 1811-1812 when three huge earthquakes shook that area and caused the Mississippi River to change it's course. Don't miss this opportunity to see the lake and its' eagles.

# NOTES FROM THE MEETING

Name:	Garnet $Fe_3Al_2[SiO_4]_3$
Class:	silicates
Hardness:	6.5
Fracture:	splintery
Streak:	white
Crystals:	Isometric-Hexoctahedral
Location:	Porter Springs, Georgia

1. What is the name of the January Specimen-of-the-Month?  
\_\_\_\_\_
2. Cut out the specimen card and put it with your mineral specimen.
3. List some of your favorite rocks, minerals, and fossils here.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

This is your newsletter. Put your name on it, and take it home with you.

Your Name \_\_\_\_\_

