



PARK RANGER IN TRAINING

GRADE LEVEL: 5–8 **SUBJECTS:** Science, Language Arts, Visual Arts **DURATION:** Three 40-minute class periods
NATIONAL STANDARDS: Science, Standard 4: Earth and space science; Language Arts, Standard 4: Communication skills; Visual Arts, Standard 1: Understanding and applying media, techniques, and processes
MATERIALS: Reference materials about rock formations, Internet access, a park ranger hat
Use this lesson to have students pretend to be park rangers explaining the natural history of a specific rock formation.

DESCRIPTION

Stanley and Zero escape from Camp Green Lake and take refuge atop God's Thumb. Rock formations and outcroppings, like the fictional God's Thumb, are often formed by erosion. Erosion is a process by which rock and other materials in the Earth's crust are broken down and carried away. Water, weather, and chemicals contribute to erosion and result in many rock formations which geologists call "hoodoos" – fantastic or bizarre rocks that look like familiar shapes or objects.

OBJECTIVES

- To research, collect, and organize information for a brief oral presentation about rock formations
- To understand how erosion helps to shape the Earth's surface
- To speak clearly and authoritatively on a research topic

ADAPTATIONS

Arrange younger students into groups of two or three for their research and presentations, and extend the presentation time to five to six minutes. Have students look at the various formations on the *Holes* web site and have students come up with similes or metaphors to describe them.

ASSESSMENT

Design a five-point rubric to assess students on: inclusion of required information in their presentation, creative and effective use of visual aids, and quality of responses to questions.

EXTENSIONS

Invite a park ranger, geologist, local historian, or American Indian storyteller to class to discuss rock formations in your state.

USEFUL RESOURCES

The National Park Service provides images and information: www.nps.gov

The US Geological Survey web site provides a glossary and other useful information: www.usgs.gov

The American Geological Institute for Education provides links to educators: www.agiweb.org/education

PROCEDURES

1. Read the description of God's Thumb at the end of chapter 29 in *Holes*. Ask students how this rock formation might have formed.
2. Show students examples of various interesting rock formations. Several good examples are on the *Holes* movie web site, www.holes.com.
3. Assign a different formation to each student. A rock formations list is provided on the Useful References page in the back of this guide.
4. Remind students to pretend they are a park ranger giving a brief presentation to a visiting group of students.
5. Allow students the remainder of class to research their rock formations. Students must include the following in a two to three minute presentation: name of rock formation, location, size and unusual features, how the formation was formed, age of the formation, any interesting folklore or legend associated with the formation, a book, magazine, or web site where people can find out more, and visual aids.
6. Have students wear the ranger hat, if appropriate to grade level, while presenting and fielding questions from the audience.

ROCK FORMATION LIST

This is a general list of rock formations in the United States. Depending on your curriculum and your location, you may want to use formations that are within your state.

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| 1. Delicate Arch, Utah | 11. Rainbow Bridge, Arizona |
| 2. Big Balanced Rock, Arizona | 12. Boar's Tusk, Wyoming |
| 3. Chimney Rock, Nebraska | 13. The Needles, Utah |
| 4. Old Man in the Mountain, New Hampshire | 14. Whitehouse Ruin, Arizona |
| 5. Ship Rock, New Mexico | 15. Spider Rock, Arizona |
| 6. Mexican Hat, Utah | 16. Stone Mountain, Georgia |
| 7. Devils Tower, Wyoming | 17. Haystack Rock, Oregon |
| 8. Luray Caverns, Virginia | 18. Lighthouse Rock, Texas |
| 9. Blowing Rock, North Carolina | 19. Fall Creek Gorge, New York |
| 10. Miner's Castle, Michigan | 20. Eye of the Needle, South Dakota |
| | 21. Enchanted Rock, Texas |