



# GEOLOGY



## WHAT'S IT ALL ABOUT?

Did you find a rock at the park and don't know what kind it is? What about fossils? If you would like to learn more about rocks, minerals and fossils, then dig into the geology project! Discover the types of minerals, rocks and fossils that can be found where you live.

## HERE'S WHAT YOU CAN LEARN...

### STARTING OUT

- ✿ Learn how the earth was formed and its three main parts
- ✿ Learn the difference between a rock and a fossil
- ✿ Collect, clean, identify and label rocks, minerals and fossils
- ✿ Learn the types of erosion and their impacts

### LEARNING MORE

- ✿ Use different tests to identify minerals by hardness and color
- ✿ Learn how to identify fossils
- ✿ Learn to display and evaluate geology exhibits
- ✿ Learn how mountains are formed
- ✿ Discover the impact of glaciers

### GOING FURTHER

- ✿ Learn to measure specific gravity
- ✿ Read and use a topographic map
- ✿ Measure formation thickness
- ✿ Test to determine chemical properties of minerals
- ✿ Locate sites on a plat map
- ✿ How to prepare for geology careers

## RESOURCES

- ✿ Discover 4-H Geology Clubs (<http://utah4h.org/discover/>)
- ✿ Kansas 4-H Geology Project Leader Notebook ([uwyo.edu/4-h](http://uwyo.edu/4-h))

## TAKE IT FURTHER!

- ✿ Take a field trip with a purpose. Look for hills, canyons, cliffs, valleys, lakes, rocks, soils, or other natural resources
- ✿ Visit a lapidary (rock) shop in your area
- ✿ Read an article, story or a chapter from a book about rocks, minerals or geology
- ✿ Visit the University of Wyoming Geological Museum on campus in Laramie
- ✿ Visit the Tate Geological Museum in Casper
- ✿ Look for fossils around your house or visit southwest Wyoming which has a rich history in fossil collection including the Fossil Butte National Monument
- ✿ Do a home search to find the minerals and metals that are used in your home
- ✿ Find out more about the Wyoming State gemstone and where it is found
- ✿ Make your own rock tumbler

### ENHANCE YOUR COMMUNICATION SKILLS

Give a presentation about a field trip you took in Wyoming to study geology

Give a talk to your club about different types of birthstones and where they are found

### GET INVOLVED IN CITIZENSHIP AND SERVICE

Take your rock and mineral collection to a local elementary school and share your collection with them

Create jewelry with rock you find and donate them to a local charity or sell them and donate the money to a local charity

### LEARN ABOUT LEADERSHIP

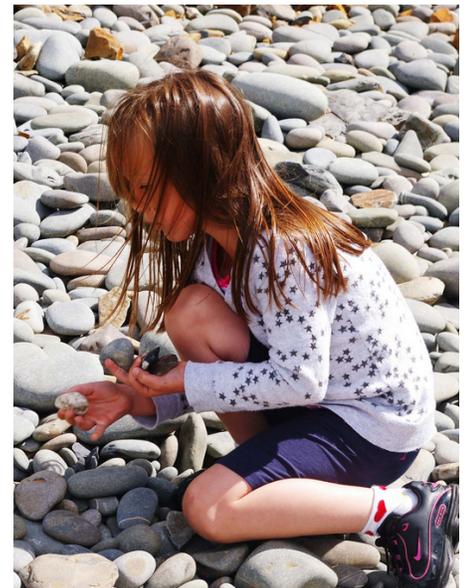
Lead a craft with your club members or Cloverbuds making rock creatures or rock art

Invite club members to take a geology field trip, create a scavenger hunt so members know what to look for related to geology

Host a rock and mineral identification contest for your club members

## EXHIBIT IDEAS

- ✿ Create an exhibit to show the geology specimens you have collected. Be sure to label the specimens with the correct names
- ✿ Explain the rock cycle using words and pictures
- ✿ Display rocks from three major types of rocks: igneous, sedimentary and metamorphic
- ✿ Create a poster showing how rocks change
- ✿ Create a rock creature or rock art
- ✿ Make your own rock crystals for display
- ✿ Make a poster or display about rock textures
- ✿ Create a display about erosion or the effects of erosion in Wyoming
- ✿ Make a display about what different types of minerals are used for



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