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Crystals in the World Around Us

Guide for Curriculum Unit 89.06.06
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“Crystals in the World Around Us” is a collection of essays on crystals. There is a hands-on section in which the students take part in growing their own crystals from solution. The students will experiment with these crystals to find out about their particular properties. A crystals display will be set up showing the crystals in their various stages of development. After this we look into the internal structure of crystals to see if we could understand some of the forces that mold crystals. Why are they shaped that way, with their shiny faces in those particular angles? These are the kinds of questions we will try to answer. We will touch lightly on the Periodic Table, atoms, molecule and the ion in order to better understand the building blocks of nature.

This will be followed up with ways of identifying crystals. How does the geologist identify minerals? Armed with his criteria and tools the class will try to identify some unknown rocks.

There is a brief section which includes geometric patterns which, when cut out, can be shaped into beautiful 3-dimensional geometric forms that conform to the ideal crystal shapes. This will be fun as well as reinforce concepts of crystals. There is a short section on math and how to use it to make size comparisons, from the very small to the very big. Graphic examples are given showing how they were worked out. The teacher is encouraged, with the participation of the class, to come up with funny and novel illustrations of her own.

Finally, recommendations are made on touring the city and observing where and how crystals are used from buildings, sidewalks and technology.

(Recommended for Science and Math classes at the elementary and middle school levels)

Key Words

Geology Crystals Mathematics Shapes Geometry