

Gypsum Encyclopedia Article

Gypsum

The following sections of this BookRags Literature Study Guide is offprint from Gale's For Students Series: Presenting Analysis, Context, and Criticism on Commonly Studied Works: Introduction, Author Biography, Plot Summary, Characters, Themes, Style, Historical Context, Critical Overview, Criticism and Critical Essays, Media Adaptations, Topics for Further Study, Compare & Contrast, What Do I Read Next?, For Further Study, and Sources.

(c)1998-2002; (c)2002 by Gale. Gale is an imprint of The Gale Group, Inc., a division of Thomson Learning, Inc. Gale and Design and Thomson Learning are trademarks used herein under license.

The following sections, if they exist, are offprint from Beacham's Encyclopedia of Popular Fiction: "Social Concerns", "Thematic Overview", "Techniques", "Literary Precedents", "Key Questions", "Related Titles", "Adaptations", "Related Web Sites". (c)1994-2005, by Walton Beacham.

The following sections, if they exist, are offprint from Beacham's Guide to Literature for Young Adults: "About the Author", "Overview", "Setting", "Literary Qualities", "Social Sensitivity", "Topics for Discussion", "Ideas for Reports and Papers". (c)1994-2005, by Walton Beacham.

All other sections in this Literature Study Guide are owned and copyrighted by BookRags, Inc.



Contents

[Gypsum Encyclopedia Article.....1](#)

[Contents.....2](#)

[Gypsum.....3](#)

Gypsum

Gypsum, a white mineral soft enough to be scratched with a fingernail, is hydrated calcium sulfate [$\text{Ca}(\text{SO}_4) \cdot 2\text{H}_2\text{O}$]. Gypsum often begins as calcium sulfate dissolved in an isolated body of salt **water**. As the water evaporates, the calcium sulfate becomes so concentrated that it can no longer remain in solution and crystallizes out (precipitates) as gypsum. Many large beds of gypsum have been formed in this way.

Gypsum occurs in a number of distinct forms, including a clear, parallelogram-shaped crystal (selenite); a white, **amorphous** form (alabaster, used for ornamental carving); and a fibrous, lustrous form (satin spar, used in jewelry). When ground up and heated to drive off its water, gypsum becomes a powder termed plaster of Paris. Plaster of Paris has the useful property of hardening in any desired shape when mixed with water, molded, and allowed to dry.

Gypsum is one of the most widely used **minerals** in the world. Some 90 countries mine gypsum, producing more than 100 million tons (91 million metric tons) annually. The construction industry has long been particularly gypsum intensive. In the late nineteenth and early twentieth centuries gypsum was widely used in plastering, which since the 1950s has been displaced by gypsum drywall (sheetrock). The average new U.S. home contains tons of gypsum drywall. Gypsum is also an ingredient in portland cement, which is used in the construction of bridges, buildings, highways, and the like, and millions of tons of gypsum are used annually as fertilizer. Small quantities of pure gypsum are essential in smelting, glassmaking, and other industries.

Low-grade gypsum is manufactured synthetically at coal-fired electric power plants as a by-product of pollution-control processes that remove sulfur from flue gas. Synthetic gypsum production exceeds 110 million tons (100 million metric tons) annually.

See Also

Mohs' Scale