

Chemistry of Color

Grades 2-5

Pre-visit Resources

Program Objectives

By participating in *Chemistry of Color*, students will:

- Use critical thinking and cooperative learning as they explore the connection between science and art.
- Explore how natural materials can be used as the basis for making paint.
- Learn about the scientific method by making control and test samples to observe color permanence.
- Understand the development and use of paint in a historical context, from pre-historic to modern times.

Vocabulary

During the program, students will learn to use the following vocabulary as they explore the nature and history of paint.

Pigment: A substance used for coloring or painting, when mixed with oil, water, or another medium, constitutes paint.

Binder: The ingredient in paint that holds pigment particles to a surface.

Permanence: Lasting or remaining unchanged for an extended period of time or indefinitely.

Mineral: Solid, non-living substance that occurs naturally.

Color: The element of art that is produced when light is reflected back to the eye.

Chemistry: The branch of science dealing with how substances interact, combine and change.

Online Resources

Prior to your visit, you may want to introduce your students to civilization's earliest artists and their subjects using the following online resources:

National Geographic, *Chauvet Cave: France's Magical Ice Age Art*

Introduce students to the Ice Age art of Chauvet Cave, which is some of the oldest art in the world.

http://magma.nationalgeographic.com/ngm/data/2001/08/01/html/ft_20010801.6.html

BBC News, *Science Shows Cave Art Developed Early*

Discover how scientists are working to learn more about the earliest cave art using new technologies.

<http://news.bbc.co.uk/2/hi/science/nature/1577421.stm>