Paint a Fresco

Fresco means "fresh" in Italian. Paintings done on wet plaster are called frescoes because the plaster is fresh; this means that the plaster was still wet when the artist painted on it. One of the most famous frescoes ever painted was finished in 1512 by the artist Michelangelo Buonarroti. This fresco was painted almost 70 feet above the ground on the ceiling of the Sistine Chapel in Rome, Italy. Michelangelo and his helpers spent four years painting this fresco masterpiece. While lying on his back, he mixed small amounts of plaster, smoothed it on the ceiling, and painted it while it was still wet.

Materials

Small disposable plastic dessert plate
Small disposable plastic cup
Craft stick
Plaster of Paris
Water
Acrylic paints or poster paints
Tablespoon
Paintbrush
Cup of rinse water

Note: Painting on plaster is different than painting on paper. Experiment with the interesting designs that can be made as the paint and paintbrush are dragged through wet plaster. What happens to the surface of the plaster as it begins to harden? Does it become more difficult to paint?

Procedure

1. Place 2 tablespoons of plaster of Paris in a small cup. Add 1 tablespoon of water and stir with the craft stick until the mixture is smooth.
2. Pour the wet plaster onto the plastic plate.
3. Smooth the plaster out with the craft stick until it covers the bottom of the plate.
4. Dip the brush into one color of paint and begin to paint the plaster right away. Before the brush is dipped into the paint a second time, rinse the paintbrush well. Rinse the brush even if the same color of paint is used. If the brush is not rinsed before being dipped into the paint each time, plaster will get into the paint.
5. When you have completed your painting, thoroughly clean the work area and wash your hands.
6. When the fresco is completely dry, twist the plate gently. This will loosen the fresco so that it comes out easily.

Where's the Chemistry?

Plaster and paint are made of chemicals, and a chemical change happens as the fresco is being created. As the fresco dries, a chemical in the wet plaster called calcium hydrate combines with a chemical from the air called carbon dioxide. When these chemicals combine, the paint gets stuck in the plaster so that it won't peel, chip, or wash off. This is one reason that frescoes can last a very long time. If your newly made fresco is kept safe, it will last a very long time, too.

Note: Frescoes can be moved when they are wet as long as they are kept flat and in the plastic plate.

SAFETY! *SAFETY: Be sure to follow Milli's Safety Tips and do this activity only with adult supervision! Do not drink any of the liquids used in this activity. Eye protection must be worn by everyone performing this activity.*

The American Chemical Society develops materials for elementary school age children to spark their interest in science and teach developmentally appropriate chemistry concepts. The *Activities for Children* collection includes hands-on activities, articles, puzzles, and games on topics related to children's everyday experiences.

The collection can be used to supplement the science curriculum, celebrate National Chemistry Week, develop Chemists Celebrate Earth Day events, invite children to give science a try at a large event, or to explore just for fun at home.

Find more activities, articles, puzzles and games at www.acs.org/kids.

Safety Tips

This activity is intended for elementary school children under the direct supervision of an adult. The American Chemical Society cannot be responsible for any accidents or injuries that may result from conducting the activities without proper supervision, from not specifically following directions, or from ignoring the cautions contained in the text.

Always:

- Work with an adult.
- Read and follow all directions for the activity.
- Read all warning labels on all materials being used.
- Wear eye protection.
- Follow safety warnings or precautions, such as wearing gloves or tying back long hair.
- Use all materials carefully, following the directions given.
- Be sure to clean up and dispose of materials properly when you are finished with an activity.
- Wash your hands well after every activity.

Never eat or drink while conducting an experiment, and be careful to keep all of the materials used away from your mouth, nose, and eyes!

Never experiment on your own!

For more detailed information on safety go to www.acs.org/education and click on "Safety Guidelines".