



**W**ax can be used to keep things clean by protecting them. Apples at the market are often coated with a thin layer of wax to protect them. The coating helps them last longer, and makes them look shiny and fresh. In this activity, you will use candle wax to make an “invisible” design that you will reveal with watercolor paints.

## Materials

- \* Paper towels
- \* White candle (birthday candle or small taper)
- \* Sheet of white paper
- \* Paintbrush
- \* Cup of water
- \* Watercolor paints (dark colors work best)

*NOTE: Paper towels should be available as mats for the activity and for cleaning up accidental spills while conducting this activity.*

**ADAPTATION** *A white crayon may be used instead of the candle, and water-based markers may be used instead of watercolor paints. A wide foam brush may be easier for some people to use than a traditional paintbrush.*

**SAFETY!** *Be sure to follow Milli's Safety Tips and do this activity with an adult! Do not drink any of the water used in this activity.*

## Procedure

1. Use the bottom of the candle to write a secret message or draw a picture on the paper. It will not be easy to see what you are drawing, so look carefully.
2. Dip the paintbrush into the water, and then mix it with a dark color of paint.
3. Paint across the surface of the paper making sure to paint over the areas that you marked with the candle.
4. Take a look at your finished picture. What happened when you painted across a place where there was wax on the paper? Write your observations in the “What Did You Observe?” section.
5. Put your paper aside to dry.
6. Rinse the paintbrushes with plenty of water. Thoroughly clean the work area, and wash your hands.

## Where's the Chemistry?

The wax protected the white surface of the paper from being colored by the watercolor paint. Because wax does not mix with water, it blocked the watercolor paint from reaching the paper underneath.

In the same way that you coated the paper with wax, dentists can coat the tops of your back teeth with a special type of plastic sealant. The sealant prevents tooth decay by keeping food and bacteria away from the surfaces of these teeth. The sealant does not easily rub or wash off of your teeth, so it can protect them from decay for several years. You will still need to brush for two minutes twice a day to keep your other teeth and your gums healthy!





### What Did You Observe?

*Describe what happened when you painted across the paper.*



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](http://www.acs.org/kids).

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## 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](http://www.acs.org/education) and click on "Safety Guidelines".**

