



Super Science Connections: Freckle Face

Can you make freckles disappear?

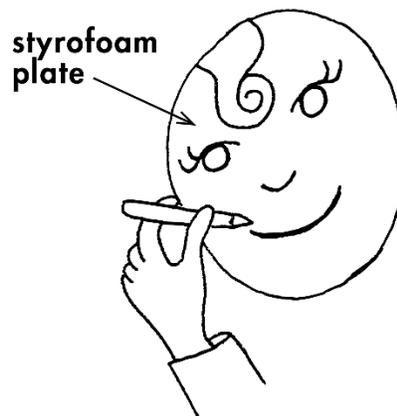
This activity is intended for children entering grades K-4 in the next school year. To carry it out safely there must be a responsible older person to prepare materials, read directions aloud, and supervise the activity. This could be a parent, guardian, or older sibling. The supervisor should do the preparation steps and consult the science background information on the last page before leading children through the activity.

Materials:

- Styrofoam plate
- Crayons
- Pepper shaker
- Toothpick
- ¼ teaspoon (1.2 mL) dish detergent in a small plastic cup (very little detergent is needed)
- ¼ cup (60 mL) water

Directions:

1. Draw a face on the top of the Styrofoam plate with crayons (NOT markers).
2. Pour the water onto the plate so that it is about ¼ inch (0.6cm) deep.
3. Sprinkle pepper on the water (for the freckles).
4. Dip a toothpick into the dish detergent.
5. Then touch the toothpick to the surface of the water. Watch what happens! Write observations!



Discussion:

- What happened to the freckles after the toothpick with dish detergent was touched to the surface of the water?

This activity is courtesy of ICE, the Institute for Chemical Education at UW-Madison's Chemistry Department. It is adapted for use at home from Freckle Face in the Super Science Connections Section 4: Surface Tension activities offered by ICE at this link:

http://ice.chem.wisc.edu/sites/ice.chem.wisc.edu/files/images/Publications/SSC/SSC_Surface.pdf

Parent's/Guardian's Page

Discussion:

- What happened to the freckles after the toothpick with dish detergent was touched to the surface of the water? (The freckles sank below the surface of the water because the surface tension was broken when the soap on the toothpick was put into the water.)

Science Background:

The pepper floats on the water because of the surface tension of the water. The detergent breaks the surface tension as it spreads out onto the water from the toothpick, so the pepper no longer floats.



This activity is courtesy of ICE, the Institute for Chemical Education at UW-Madison's Chemistry Department. It is adapted for use at home from Freckle Face in the Super Science Connections Section 4: Surface Tension activities offered by ICE at this link:

http://ice.chem.wisc.edu/sites/ice.chem.wisc.edu/files/images/Publications/SSC/SSC_Surface.pdf