

Project FOCUS
Best Lessons
SECOND GRADE

Title of Lesson: Elmers Gack

Theme: Physical Science

Unit Number: **Unit Title: Properties of Matter**

Performance Standard(s) Covered (enter code):

S2P1

Enduring Standards (objectives of activity):

Habits of Mind

- X Asks questions
- Uses numbers to quantify
- X Works in a group
- Uses tools to measure and view
- Looks at how parts of things are needed
- X Describes and compares using physical attributes
- X Observes using senses
- X Draws and describes observations

Content (key terms and topics covered):

The three phases of matter and how they can change.

Learning Activity (description in steps)

Abstract (limit 100 characters): Turning a liquid into a solid the fun way.

Details: I started by selecting a few students at a time to do the experiment with while the rest of the class worked in their science workbooks on the same subject. The group that performed the experiment had their science journals with them so they could write down what the experiment entailed, and their observations and results. I started out by showing the kids all the ingredients and asking them what each state of matter they were in and what would happen if we mixed them together. I first began by pouring the glue into the bowl and then filling the empty glue bottle with warm water to ensure all the glue was used. Then I added food coloring to spice up the experiment. Then I added a half cup of warm water to the glue mixture and stirred, then a teaspoon of borax was added while still stirring. Then while stirring I added more borax to make the molecules stick together, once it is too hard to stir with a spoon I let the children use their hands to stir, and squish the liquid into a resulting rubbery solid, letting each child have a turn to mix the gack. Then I asked them what was the result and what state of matter was the product. Which they all wrote down in their journals. Then I evenly divided up the gack and placed it in ziplock bags for the students to take home.

Materials Needed (type and quantity): Elmer's Glue (8 oz bottle) Borax (a powdered soap found in the grocery store) Large mixing bowl, Plastic cup (8 oz size works well) Spoon Measuring cup Food coloring, Hot Water, Paper towels, Zipper-lock bag (to keep it when you're done)

Notes and Tips (general changes, alternative methods, cautions): Be careful when letting the students mix the gack, they will get it everywhere and all over their clothes. Make sure they mix it lightly and that their sleeves are pulled up. Also inform them that mixture is not edible, just in case.

Sources/References:

1) <http://www.stevespanglerscience.com/experiment/glue-borax-gak>