



## Polymer Activity from the:

Teachers may reproduce this activity for their use

Atlanta NSTA "Make and Take" Activity: April 2004

### Making Glow-in-the-Dark Slime

**Grades:** Elementary to High School

**Science Standards:** Content Standard B: Physical Science

**Purpose:** To produce a clear slime that will glow in the dark, due to the addition of phosphorescent ZnS. This is especially fun for Family Science nights, since the children can carry home glowing bags of slime.

#### Materials:

For clear slime, use either of these types:

- (1) Solution of 4% poly(vinyl alcohol) in water, or
- (2) Solution of clear Elmer's Glue-Gel (either the clear or the pale blue will work) made by mixing 1 part Glue-Gel with 3 parts warm water. Mix well.

Phosphorescent zinc sulfide (ZnS) was obtained from Educational Innovations:

Glow-in-the-Dark Pigment, #GLO-100A (1 oz) \$3.95 or  
#GLO-100B (8 oz) \$18.95

4% (saturated) borax solution

Cups for mixing the slime

Measuring cups: 30 mL and 10 mL (or use tablespoon and teaspoon measures)

1/8 teaspoon measure for the ZnS

Stirring sticks

Plastic zip top bags

#### Procedure:

1. For either type of slime, measure 30 mL (2 tablespoons) of slime mixture into a mixing cup.
2. Add 1/8 teaspoon of the ZnS powder and stir well with a stir stick. The ZnS will not dissolve, but it needs to be well dispersed in the liquid.
3. While still stirring, add 10 mL (2 teaspoons) of the borax solution and stir until the mixture is thick enough to remove from the cup. This requires a lot of stirring.

4. Take home in a zip top bag. After this mixture is exposed to light (sunlight or indoor lights) it will glow for several hours.
5. If the slime is kept in a bag when not being used, it will last for several weeks. If it turns gray with mold, it should be thrown away in the trash.
6. If the slime is allowed to dry, it will become very hard and brittle, but will still glow in the dark.

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Polymer Ambassador Web Site: [www.polymerambassadors.org](http://www.polymerambassadors.org)