

Polymers

Background Information

- What is a polymer?

A polymer is a large molecule made of small units linked together, like a chain.

- Examples of polymers: rubber, nylon, plastics, cellulose (in paper), DNA

- Polymers can have a variety of interesting properties. These properties depend upon the starting materials used to make the polymer.

Materials

-Borax

-Cornstarch

-Glue

-Warm Water

-Food Coloring

Lesson Plan

The students will form as many groups as there are teachers. If there are too many students per teacher, they can be paired off to work together. Go over the entire procedure with the students and have each student decide the amounts of each ingredient they will use.

Get the warm water for them from the kettles: make sure it is not painfully hot.

When the ball is formed, have the students test and record its different properties. If there's time, you can make a second set of balls. Students get one data sheet per bouncy ball made.

Ask the students to make observations about their bouncy balls and fill them in on the sheet.

If students are having problems getting a ball to form, note the following:

-adding more cornstarch will make a ball that stretches and bends

-using less borax will produce a 'goopier' type of ball

-adding more glue makes for a slimier ball

Adapted from <http://sciencebus.wikispaces.com/Spring+2011+-+Polymers>