

# [Chemistry 1120 report examples](https://assignbuster.com/chemistry-1120-report-examples/)

[Environment](https://assignbuster.com/essay-subjects/environment/), [Water](https://assignbuster.com/essay-subjects/environment/water/)

## Take Home Experiment Report

Observations: I dissolved as much of the borax as possible in 500 ml of water. I added the glue and stirred. A solid ball formed that when squeezed more glue would come out. Putting it back in the water and working it in would make more solid. After kneading the solid, I could form it into a ball that bounced. The amount of water went down about 10 ml.
Partner Identity, Reactions, and Questions: My lab partner was my mom. Both of us were surprised that the gooey solid was formed from glue and a liquid. It was strange to see the solid being formed while kneading the glue back into the solid ball. She asked me if I knew what happened but I was not sure so I decided to see if I could find an explanation.
Possible Chemistry: Elmer’s Glue contains polyvinyl acetate suspended in water. The polyvinyl acetate is a repeating carbon chain that has –COOCH3 (acetate) groups available for reaction. Borax is sodium tetraborate (Na2B4O7 plus 10 H2O) and when it is dissolved in water it makes borate ions, B4O5(OH)42- . When mixed with the polyvinyl acetate, borate acts as a cross-linker linking the carbon chains together to form a solid. The possible reaction product below shows how the cross-links might look if the borate replaces two acetate groups on each chain. One way the water could go down is if water gets trapped between the cross-linked chains. The trapped water makes the solid gooey and as the solid dries and the trapped water evaporates it becomes less gooey.
Possible Reaction Product