

**EXAMPLE OF A 4th/5th GRADE
INVESTIGATION SCIENCE FAIR PROPOSAL**

THIS IS THE LEVEL OF DETAIL WE ARE LOOKING FOR...

Name(s): Karen P

Teacher: Mrs. Waite-Lopez

Name of Experiment: Borax crystals gone wild

Question: What effect will adding different chemicals to a borax solution have on the crystals that form when the solution is cooled?

Hypothesis: Adding other chemicals that also form crystals will change the shape of the final crystals that form when the mixed solution is cooled. Adding chemicals that are colored will make the borax crystals colored.

Proposed Experiment:

My control will be to add five tablespoons of borax to two cups of boiling water and make it dissolve. I will suspend a j-shaped piece of pipe cleaner in the solution and allow it to cool to room temperature. Twenty-four hours later I will remove the pipe cleaner from the solution. These crystals will be my control.

I will then set up exactly the same conditions in other jars, except I will add 2 tablespoons of an additional substance to each one. I will try: sugar, table salt, baking soda, orange juice and Epsom salt. I will do each substance twice to verify whatever effect I see is reproducible.

I will then compare the crystals from each of the experimental jars with those formed under the control conditions, and see if my hypothesis was correct.

Please add the following to the end of your proposal:

Do you need an electrical outlet? Yes or No (circle one)

Teacher signature: _____ (Approval necessary).