

FLUBBER

PURPOSE: Children will observe how matter changes.

MATERIALS:

Book Topics: polymers, states of matter, solids

4 oz. Elmer's glue

1 teaspoon Borax

Plastic container

Cup

4 oz. water

Teaspoon

Measuring cup

**PROCEDURE:**

1. Pour four ounces of Elmer's glue into a plastic container.
2. Add two ounces of water to the glue, and mix.
3. Measure one teaspoon of Borax, and it to the remaining two ounces of water.
4. Mix the Borax and water until the Borax dissolves.
5. Have family members make a prediction of what will happen when the Borax and water solution is added to the glue and water in the plastic container.
6. Add the Borax and water solution to the glue and water and mix.
7. Observe. Describe what happens.
8. Pick up the flubber. Squeeze it between your fingers. What does it feel like?
9. Have the family member/friend take turns playing with the flubber. What are some of the characteristics of the material you have made? Write them down.
10. Describe what flubber feels like. Have you ever felt a product like it before? If so, what was it called?

HOW IT WORKS: Your glue and water mixture contain molecular chains called polymers which move relatively free as a liquid. When you add the Borax solution, it acts as a "cross binder" binding the polymer chains together and restricting their movement. It is this molecule in the Borax that causes the liquid to turn into flubber.

**WRITING PROMPT**

You have just created a new product by adding the borax and water to the glue.

Think about what the new product looks like and how it feels.

Now write about a game you created with the new product.

Parent Signature: _____

**FAMILY SCIENCE PROJECT**

Date: _____

Name: _____

Teacher: _____

Hypothesis (What do you think will happen?)

Date/Observation:

Conclusion: (What you learned or discovered):

*(*You may continue your observation on another sheet. You may want to create a graph to record your data.)*

For the reading portion of Family Science, you may choose to read a book or an article, OR you may use the Internet in order to find some background information concerning this Family Science Project. If you read a book or an article, please include the complete title and author. If instead you looked up the information on the Internet, please include the complete website.

We read the following book, **OR** researched the information on the Internet:

Book Title: _____ Author: _____

Internet-Complete Website _____

Writing Prompt (minimum 5 sentences)
