Physical Science	Coagulatiing Coffee Cup	Date
Ms Toal		Period
KJHS	Name	

Title: Coagulating Coffee Cups

Objective: to see that Styrofoam is mostly _____ _____ _____ between molecules of _____.

Hypothesis: If I add a Styrofoam cup to acetone, I think the cup will change into _____ *(describe what you think will happen)*

Materials: little pie tin, Styrofoam cup, acetone

Procedures:

1. Pour small amount of acetone into pie tin
2. Place Styrofoam cup inside pie tin.
3. Observe, and touch with mechanical pencil.
4. Teacher will remove material from acetone – it can be touched at this point with your hands.

Observations:

1. Acetone: waft: _____ feels:_____
2. Styrofoam before acetone: _____
3. Styrofoam while in acetone: _____
4. Styrofoam after acetone: _____

Write up:

1. What substance makes up the majority of the volume of the Styrofoam cup?
   _____
   _____
2. In your own words, what do you think "coagulate" means? _____
   _____
3. Which is the solute, and which is the solvent?
   Solute: _____ solvent: _____
4. Putting the Styrofoam cup into acetone. Is this a physical or chemical change? **Explain your thoughts.** _____
   _____
   _____
5. What is a polymer (key idea on pager 307)? _____
   _____
6. **List and describe** 3 **natural** polymers from page 308
   a) _____ - _____
   b) _____ - _____
   c) _____ - _____
7. Define **protein:** _____
   _____
8. Define **amino acid**: _____

Physical Science | Making Goop | Date
Ms Toal | | Period
KJHS | Name

Title: making glue to goop – a polymer lab

Objective: to create a _____ from a mixture of glue, borax, and water

Borax: a cleaning agent, mined in _____, California.

Hypothesis: I think that when we mix the borax solution with a glue solution,
it will become a _____

Materials: popsicle stick, Dixie cup with glue solution, Dixie cup with borax solution

Procedures: Making Goop

1. Make an observation for the glue solution
2. Make an observation about the borax solution.
3. Pour the borax solution into the glue solution.
4. Stir constantly with a popsicle stick for 2 minutes
5. Remove substance from cup DO NOT GET ON BOOKS OR CLOTHING.
6. Make 2 observations about this new material called a _____.
7. Bring Gloop to front table in the cup.
8. Wash your hands!! Put the materials away. **No Goop can go down the sinks!!!!**

Observations:

Material	Observation
Glue solution	
Borax solution	
New material	1.
(2 observations)	2.

Write up: (Use textbook – pages 309 – 313)

9. Define **"plastics"** from page 309. _____
_____

10. List the **names, properties and uses** for **3 synthetic polymers** from Figure 18 on pager 309.
    a) _____ - _____
    b) _____ - _____
    c) _____ - _____

11. Draw the timeline of the development of Polymers in History on page 310.

12. What's the BIG difference between natural polymers and synthetic polymers?