

# Moon Slime

**Problem** How will changing the quantity of water in a chemical reaction affect the final product?

**Hypothesis** *What do you think is the answer to the Problem?*

**Materials** *Each team member will need the following materials:*

- 1 paper/plastic cup
- 1 craft stick
- 1 small snack-size zip bag
- paper towels

*Materials shared by team:*

- Liquid A (opaque, thick, greenish liquid in beaker)
- Liquid B (clear, bright green in Erlenmeyer Flask)
- tap water
- 50 mL beaker
- 10 mL graduated cylinder (for liquid B ONLY)

## Procedures

1. Measure 15 mL of Liquid A into the 50 mL beaker.
2. Make qualitative observations of Liquid A and record. It is OK to touch; **DO NOT** taste.
3. Assign each member of the team a given amount of water to add to their Liquid A according to

TABLE I:

TABLE I	Team Member	1	2	3	4
	Amount of Water to use (mL)	5	10	15	20

4. Add the chosen amount of water from TABLE I to Liquid A **IN** the 50 mL beaker:  
(15 mL Liquid A + X mL of water).
5. Stir Liquid A and water well with the craft stick and pour into the paper cup.
6. Record your qualitative observations of Liquid A & water.
7. Measure 10 mL of Liquid B into the graduated cylinder.
8. Have a partner pour the Liquid B evenly (not too fast or too slow) into your paper cup as you stir constantly. Be sure to record any qualitative observations. [**NOTE: Graduated cylinders are for Liquid B ONLY!**]
9. Continue stirring until there is little liquid left; empty the contents of the cup (Moon Slime) onto your desktop.
10. Knead the slime for a minute or two until there is an even consistency.
11. Record qualitative observations of the changes that took place and the resulting slime.
12. Conduct qualitative observations and record the properties of each group member's Slime by trying the following:
  - Roll the slime into a sphere & set it in the palm of your hand. Does it keep its shape?
  - Pat the slime between your hands & try to form a thin film. Hold the film at one end & observe.
  - Drop a ball of slime on a clean desk top & observe all that happens.
  - Use a coin to make an imprint in the slime. Describe what happens.
  - Roll the slime into a long cylinder shape & slowly pull apart while holding both ends.
  - Reform the cylinder & pull it apart quickly.
  - Put the slime on the top of an upside down cup in the form of a sphere and observe what happens.
13. For your group, choose one of the following tests to conduct & record your quantitative observations of each group member's Slime (be sure to repeat each test at least 3 times and find the average for each slime):
  - ⌚ Roll into a ball and place on top of the 10 mL graduated cylinder that has been turned upside down on your desk; time how long it takes to reach the desk top.
  - ⌚ Measure the distance each slime stretches in 60 s.
  - ⌚ Hold the slime 50 cm above the desk & time how long it takes to stretch to the desk or break.
  - ⌚ Create your own quantitative test with teacher approval.
14. Store the Moon Slime in the zippy bag to take home. Be sure to remove as much air as possible to prevent the slime from drying out.
15. Graph your data and write your conclusions.