

Classroom Lab:

Chemical and Physical Changes in Matter

In this lab, you will go through stations in the classroom to look at chemical and physical changes in matter and learn the differences between these changes.

Station 1

Materials: Candle wax, test tube, test-tube holder, heat source, plastic knife, test-tube rack

Procedure: Using the knife, scrape a small amount of wax from the candle into the test tube (it is OK if it already has some dry wax in it), grab the test tube using the holder, and hold it over the heat source for 20–30 seconds. Observe and record your data.

Clean up: Place the test tube in the test-tube rack to cool.

Station 2

Materials: Vinegar, baking soda (sodium bicarbonate), small spatula, small mixing bowl

Procedure: Place a small amount of baking soda in the mixing bowl, add several drops of vinegar, and observe the new product.

Clean up: Pour the product down the sink, and rinse the bowl and spatula.

Station 3

Materials: Antacid tablets, mortar and pestle

Procedure: Place one antacid tablet in the mortar and grind to a fine texture using the pestle.

Clean up: Pour the powder in the trash, and rinse and dry the mortar and pestle.

Station 4

Materials: Antacid tablets, glass, water

Procedure: Pour a full glass of water and drop one of the tablets into the glass.

Clean up: Pour the product down the sink, and rinse the glass.

Station 5

Materials: Play dough or clay

Procedure: Mold the play dough or clay into the shape of your favorite animal.

Clean up: Return the play dough or clay to a ball shape.

Station 6

Materials: Matches, water nearby in case needed

Procedure: Strike a match and watch as it burns. Be sure to put the match out before it reaches halfway down to avoid burning your fingers. Observe the matchstick.

Clean up: Dip the match in water and discard in trash.

Station 7

Materials: Sand, water, mixing spoon, small bowl

Procedure: Mix a small amount of sand and water in the bowl and observe the product.

Clean up: Dump the product in the trash, and rinse and dry the bowl and spoon.

Station 8

Materials: Ice cubes, heat source

Procedure: Melt one ice cube using the heat source.

Clean up: Dry and wipe down the station.

Station 9

Materials: Eggs, frying pan, spatula, heat source, cooking spray

Procedure: Cook a fried egg in the pan.

Clean up: Discard the fried egg, and clean the pan and spatula.

Name:

Student Data Table

	Physical or chemical change?	Observations
Station 1: Melting candle wax		
Station 2: Mixing vinegar and baking soda		
Station 3: Crushing antacid tablets		
Station 4: Putting antacid tablets in water		

	Physical or chemical change?	Observations
Station 5: Molding play dough shapes		
Station 6: Burning a match		
Station 7: Mixing sand and water		
Station 8: Melting an ice cube		
Station 9: Frying an egg		