

A background illustration featuring a complex molecular structure with blue spheres connected by lines, set against a light blue gradient with faint, larger molecular shapes.

Grade 7 Science

Unit 3: Pure Substances and Mixtures

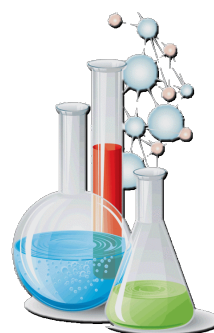
A background illustration featuring a molecular structure with blue spheres and lines, set against a light blue gradient with faint, larger molecular shapes.

Mix It Up

Today I will be explaining your next experiment. This is a 4 day long experiment, involving multiple activities. You will be doing your second lab write-up based on this experiment.

Today you will need to pay very close attention in order to ensure you are prepared to start experimenting next class.

I will call you to the back shortly.





Mix It Up

In this activity, you will investigate the characteristics and interactions of pure substances and mixtures. You will also be developing your laboratory skills by using a variety of scientific equipment.

You will work in groups to observe the interactions between various types of matter. There will be eight stations to visit. The order you visit the stations is not important. At each station, you are to carefully observe what happens, recording your observations in a manner appropriate for a lab write-up.

Here are some of the materials you will use:

- test tubes to hold the various materials
- a test-tube rack to hold the test tubes upright
- rubber stoppers to seal the test tubes
- stirring rods to stir the different materials
- graduated cylinders and measuring spoons to measure the materials
- funnels to control the pouring of the materials



Mix It Up

Procedure - General

For this experiment, you will follow the same general procedure at each of the eight stations (with some slight variations). Regardless of the specific procedure to the station, the following will apply:

1. Do not get the funnels wet, the powdered/crystalline solids will not pour through them if they are wet (the oil funnel is an exception to this).
2. Only use the quantity of materials indicated.
3. Record observations at every stage of the experiment (before mixing, after mixing, after shaking, and after resting).
4. You are to use four of your senses, do not use taste.
5. At the end of your time your station is to be cleaned up such that the next group has no mess to deal with.

Mix It Up

Procedure - Stations


Here are the specific procedures for each station:

Grade 7 Mixtures Lab Report

Station 1 – Oil and Water

You will need the following items at this station:

- Beaker with Water
- Beaker with Oil
- Test Tube Rack
- Test Tube
- Funnel
- Rubber Stopper
- Graduated Cylinder
- 5 mL Scoop



Please follow the following instructions to complete this station:

1. Record observations of the materials before you mix them.
2. Measure out 20 mL of room temperature water and pour it into a clean test tube.
3. Place the test tube in the test tube rack.
4. Using a measuring spoon, add the oil, add 5 mL of oil to the test tube.
5. Record observations of the mixture before you shake it.
6. Put the stopper in the test tube, holding it with your thumb, run the tube upside down, and shake it.
7. Record what you observe immediately after you are done shaking the mixture.
8. Allow the test tube to sit in the test tube rack for a minimum of three minutes (more time is better).
9. Record observations of the mixture after it has rested.
10. Wash your test tube and place it upside down in the rack to dry.
11. Tidy up all of your lab supplies, leaving no mess for the next group.

Note, these instructions will be at each station, be sure to read them carefully before starting.

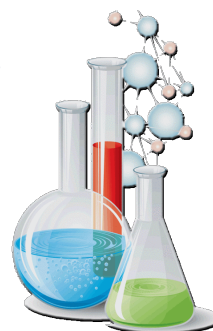
Mix It Up

This experiment will take a total of 4 periods.

- Today you will have received the explanation of the experiments.
- During your 50 and 60 minute periods we will get through three rotations per period.
- During your 40 minute period we will do two rotations.
- If there are any stations you miss, or if you do not feel you had enough time, you may come in at breaks to do the stations.

At the end of this you will be assigned your second lab write-up of the year. With that in mind, be sure to take detailed observations and notes.

If at any point you are unsure of how to use a piece of equipment, be sure to ask.



Attachments

7_science_pure_substance_mixtures_mix_it_up_procedures.pdf