

Chemistry

1. Define Chemistry.
2. List four ways Chemistry makes our lives better.
3. Understand laboratory safety.
4. Be able to recognize and learn how to use the following laboratory equipment:
 - a. Bunsen burner
 - b. Beaker
 - c. Graduated cylinder
5. Learn about the pH scale and acids and bases. Be able to give examples of acid and abase substances. Use a simple acid/base indicator to test at least six substances.
6. Define the word polymer and make a simple one.
7. Do at least one laboratory write up and know the importance of a good lab write up.

Helps: There are science websites for children that you can search. Check out YouTube as well for fun ways to explain and teach.

1. Chemistry is the study of matter and how it changes. (Matter is anything that takes up space and has mass.)
2. Clothing (nylon, rayon, etc.), transportation (gas, diesel, jet fuel, etc.), health (medicines), food (flavoring, preservation, etc.), cleaners, plastic, fireworks, water treatment. This list could go on and on.
3. Always wear safety goggles and all appropriate protective gear, always work with an adult to supervise.
- 4.
5. pH scale is something chemists use to measure how acidic or basic something is. Acids have a pH of 0-6, basis have a pH of 8-14, something that is neutral has a pH of 7. (Cabbage juice is a great acid/base indicator. Just boil purple cabbage leaves and strain off the liquid. It will turn pink in an acid and will be blue in a base.
6. Polymers are very long chains of repeating units. You can make a simple polymer out of white glue and borax. (In container 1 measure 1½ cups of warm water, 2 cups of white glue and a few drops of good coloring. In container 2 measure 1 1/3 cups of warm water and 3 teaspoons of Borax. Mix the ingredients in each container thoroughly. Pour container 2 into container 1. Gently lift and turn the mixture until only about a tablespoon of liquid is left. Mixture will be sticky for a bit. After playing with it, store it in a plastic bag.)
7. Lab write ups are how scientists share their information, if you don't have a good write up somebody else might not know what your found out.