

# Shopping List for Unit #8: Chemistry

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We're going to be using real chemicals in this Unit, some of which are corrosive, hazardous, and most are toxic. This Unit is NOT for small children or households with loose pets (so stick Rover outside while you work). As you gather your equipment for this section, please keep ALL chemicals out of reach and sealed until you need them. We'll show you how to safely store, mix, and clean up your chemicals. You can order all your chemicals from the same supplier (links provided below).

Make sure you have **goggles and gloves** for all experiments, and protect your table (put it near a window for good ventilation) with a thick plastic tablecloth. You'll be using **clear, disposable plastic cups and popsicle sticks** to do your experimenting, so grab a box of each to last the entire year.

## Acids & Bases

Red cabbage  
Strainer or colander  
Blender (or stove and sauce pan)  
Liquids/solids to test (OJ, milk, baking soda, etc.)

## Bouncy Balls

[Sodium Silicate](#) (from Unit 3)  
[Ethyl Alcohol](#) (check your pharmacy)

## Best Slime

Clear glue  
Yellow highlighter pen  
Chemicals from *Chemical Kinetics* (see below)

## Chemical Kinetics

4 empty water bottles, 4 balloons, steel wool,  
vinegar, water, salt

Advanced [Chemistry Kit](#) *All experiments in this unit use chemicals from this kit.*

OPTIONAL: [Glassware Set](#) *If you don't already own glassware just for chemistry, we've found an inexpensive set you can use all the way through college. (Or use an old set of kitchen glassware.) You'll need to get [denatured alcohol](#) for the burner.*  
Note – if you're going to continue onto to Chemistry Part 2 in Unit 15, don't get the optional glassware and instead get the C3000 (see Unit 15 shop list).

## For Grades 9-12:

Advanced [Chemistry Kit](#) *All experiments in this unit use chemicals from this kit.*

OPTIONAL: [Glassware Set](#) *If you don't already own glassware just for chemistry, we've found an inexpensive set you can use all the way through college. You'll need to get [denatured alcohol](#) for the burner.* Note – if you're going to continue onto to Chemistry Part 2 in Unit 15, don't get the optional glassware and instead get the C3000 (see Unit 15 shop list).

## Iodine Rainbow

Iodine (non-clear, non-ammonia)  
Distilled white vinegar  
Hydrogen peroxide (3% solution)

## Turning Copper to Silver to Gold

[Sodium Hydroxide](#)  
[Zinc Powder](#)  
Table salt (a few tablespoons)  
Vinegar (about a cup)  
Pennies (minted after 1982)  
[Metal Tongs](#) (these are *not* included in the optional glassware set, so pick up a pair)  
[Beaker](#) and [Burner with Stand](#) (both are included in the glassware set mentioned above)

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**Can I use my kitchen glassware? NO.**

Use either disposable plastic cups or glassware specifically designated for chemistry. Lots of chemicals will adhere to the glass and need to be etched off in order to get it 'clean' again. Don't take chances...everything that comes in contact with a chemical – including the measuring spoons – is now part of your chemistry set.

P.S. While you're at the (online) store, you might want to order a [set of lenses](#) with [extra double-convex lenses](#) (50mm, 150mm, 300mm, and 500mm), a [concave mirror](#) and [diffraction grating](#) – we'll be using these in our Unit 9 on Light to build telescopes, microscopes, and more. Also – if it's in your budget, pick up a [long-wave UV lamp](#) for the optional lesson on fluorescence.