Chemicals of Common Substances

* Pick a product in your house (cosmetic, packaged food, packaged drink, packaged nonprescription medicine, etc…). Ask if you are unsure.
* Look closely at the first website listed below.
* Find information about at least 4 of the ingredients. If you do more you will get extra credit.
	+ Molecular structure
	+ Class of ingredient (what does it do in your product?)
	+ Explain the names (what does the name tell us about the type of compound and the relationship between the name and the type of compound)
	+ Where is it found (naturally? Synthesized? Recycled?)
* Submit a finished product to D2L. You do not need to create a narrative.

**Here are some websites that might give you some information.**

Chemical Ingredients 101: How to Read a Product Label

[Safer Chemical Ingredient List](https://www.epa.gov/saferchoice/safer-ingredients)

A resource of the EPA that will allow search of individual chemicals.

[The Chemistry of Cosmetics](https://www.science.org.au/curious/people-medicine/chemistry-cosmetics)

[Overview of Food Ingredients, Additives & Colors](https://www.fda.gov/food/food-ingredients-packaging/overview-food-ingredients-additives-colors)

**My product: Bleach**

Ingredients: Water, Sodium Chloride (NaCl), Sodium Carbonate (Na2CO3), Sodium hypochlorite (NaOCl), Sodium Hydroxide (NaOH), Hydrogen peroxide (H2O2), Calcium hypochlorite (CaClO2), and Polyacrylic acid (C3H4O2).

1. **Sodium Hypochlorite**

Molecular structure: NaOCl



Class of ingredient: NaOCl neutralizes H2S and ammonia. The hypochlorous acid (HOCl) component is a very strong oxidising agent (even stronger than Cl2 gas) and can react with and destroy many types of molecules, including dyes.

Explain the names: The name “Sodium Hypochlorite” says that the compound is a mixture of sodium and chlorine along with oxygen. It is an inorganic compound. It is similar to salt (NaCl) with an extra oxygen which shows that instead of chloride ion as in salt, sodium hypochlorite contains hypochlorite with added oxygen.

Where it is found: Sodium hypochlorite (NaOCl) is a solution made from reacting chlorine with a sodium hydroxide solution