


Answer the following questions using the text chart on page 29.

- The chemical formula for ethanol is  $C_2H_5OH$ , it has **NINE** atoms.
- The chemical formula for sucrose is  $C_{12}H_{22}O_{11}$ , it has **45** atoms.
- What is sucrose and do you eat it ever? *Table Sugar, and probably all the time.*
- Potassium dichromate is written as  $K_2Cr_2O_7$ . How many atoms are in that compound? **ELEVEN**
- Aluminum oxalate is  $Al_2(C_2O_4)_3$ . How many atoms in that? **TWENTY**
- Sodium hydrogen carbonate is  $NaHCO_3$ . How many atoms is that? **SIX**
- What is the freezing point for Hg? **234K** Convert that to centigrade: **-39°C**
- What is the Boiling Point for aluminum? **2740K** Convert to centigrade **2467°C**
- What is the Freezing Point for titanium? **1933K** Convert that to centigrade **1660°C**
- Which gas is a green yellow in color? *chlorine*
- Look at the pictures at the bottom of page 30. Describe one of the arrangements of atoms to your partner; let them describe a different one to you. This will be harder than you think, please try your hardest.
- If you were to use the distillation apparatus shown on page 34, with some salt and some water, explain an experiment in 5 sentences about where the salt "was" and where it "ends up". Was this a chemical or physical change? Explain. *Salt dissolved in water is a solution (a heterogeneous mixture). Put this into distillation flask and heat. Water boils into steam, escaping through the condensing tube, changing back into pure water. Salt remains stuck in distilling flask. Due to a difference in physical properties (here, BP), the mixture is physically separated. This is a physical change.*
- See page 40. Hg is my favorite element, W is my second favorite.  
What 2 elements do you like? Why? Be as funny or as goofy as you can.
- Page 41 describes the word equation for iron and sulfur becoming iron sulfide. Copy the word equation then label the reactants and the products. Be sure to include the heat above the reaction arrow.



- State the law of conservation of mass. *Matter can not be created nor destroyed in a chemical reaction, or a physical change.*
- List 5 physical properties of matter.  
*Boiling Point = Condensation Point, Density, Hardness, Melting Point = Freezing Point, Solubility in water, Insolubility in water, Magnetic attraction or not, Particle Size, etc.*

Write the names of these elements from their symbols.			
Co <i>cobalt</i>	Ni <i>nickel</i>	Pu <i>plutonium</i>	Hg <i>mercury</i>
Mg <i>magnesium</i>	Cs <i>cesium</i>	He <i>helium</i>	N <i>nitrogen</i>
Be <i>beryllium</i>	Ti <i>titanium</i>	W <i>tungsten</i>	Pb <i>lead</i>
Ga <i>gallium</i>	Y <i>yttrium</i>	Zn <i>zinc</i>	As <i>arsenic</i>
Write out the symbols of these elements from their names			
Hydrogen <i>H</i>	Potassium <i>K</i>	Tin <i>Sn</i>	Uranium <i>U</i>
Calcium <i>Ca</i>	Bismuth <i>Bi</i> 	Platinum <i>Pt</i>	Manganese <i>Mn</i>
Krypton <i>Kr</i>	Radon <i>Rn</i>	Antimony <i>Sb</i>	Niobium <i>Nb</i>
Neon <i>Ne</i>	Fluorine <i>F</i>	Xenon <i>Xe</i>	Phosphorous <i>P</i>

- \_\_\_\_\_ During a chemical reaction, the properties of the reactants
- Are retained by the products
  - are lost as new properties of products are created*
  - a blend of properties between the reactants form in the new products

- \_\_\_\_\_ When 2 grams of hydrogen combine with 70 grams of chlorine how much HCl forms?
- 72 g*
  - 2 g
  - 70 g
  - an unknowable amount

What do the letters of TOPIC B stand for? What do each of these indicate might have happened?  
*Temperature Change, Odor, Precipitate, Irreversibility, Color Change, New Bubbles.*  
*These are all indicators that a chemical reaction has occurred.*

Hydrogen monochloride gas forms from the synthesis between the gases of hydrogen and chlorine, what are the REACTANTS and which are the PRODUCTS?  
*Hydrogen and chlorine are reactants. The product is hydrogen monochloride.*