

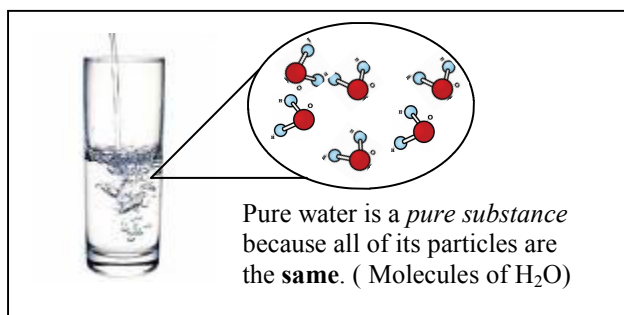
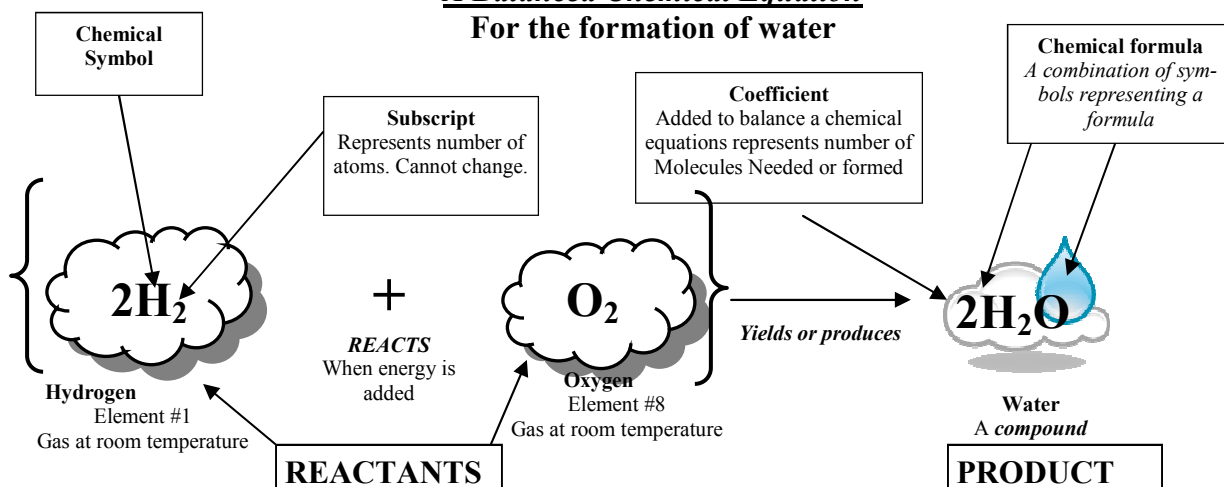
Name \_\_\_\_\_  
Period \_\_\_\_\_

## Unit 3 Compounds

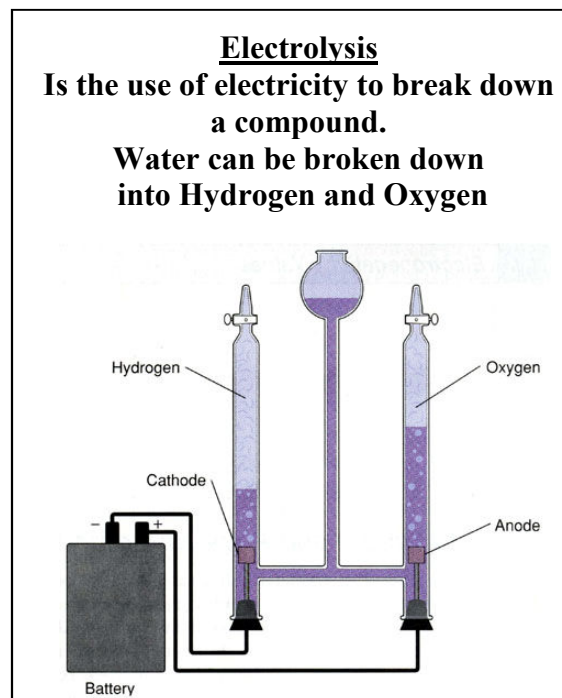
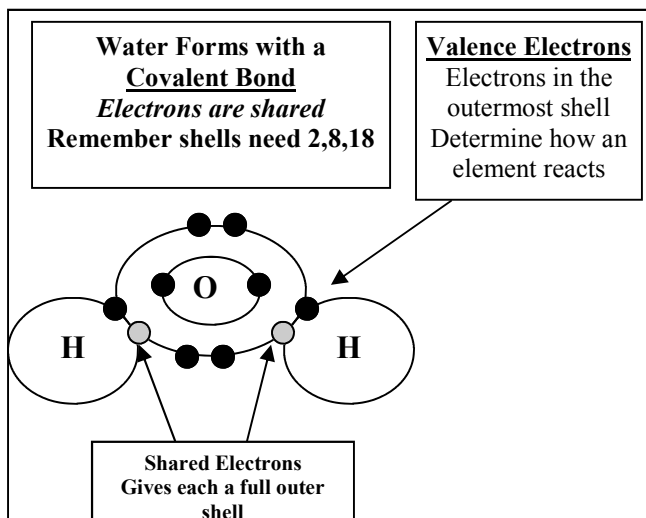
A compound is two or more substance *chemically* combined  
Made up of two or more types of atoms in a *molecule*  
Still considered a *pure substance* because they are made up of ONE type of PARTICLE.

Compounds form when two or more atoms of different elements *chemically* combine.  
For example:

### A Balanced Chemical Equation For the formation of water



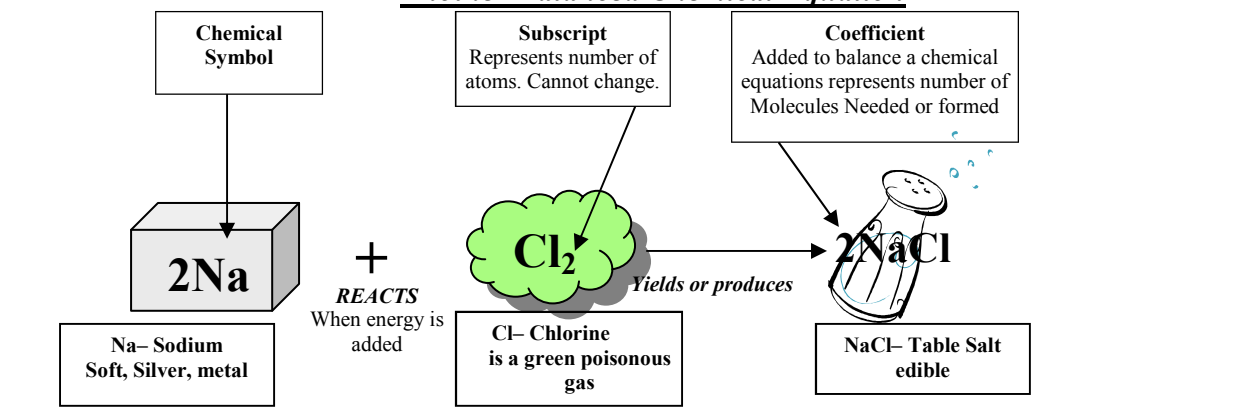
Compounds can *only* be broken down by *chemical* means. Usually with *light*, *heat* or *electricity*.



Name \_\_\_\_\_  
 Period \_\_\_\_\_

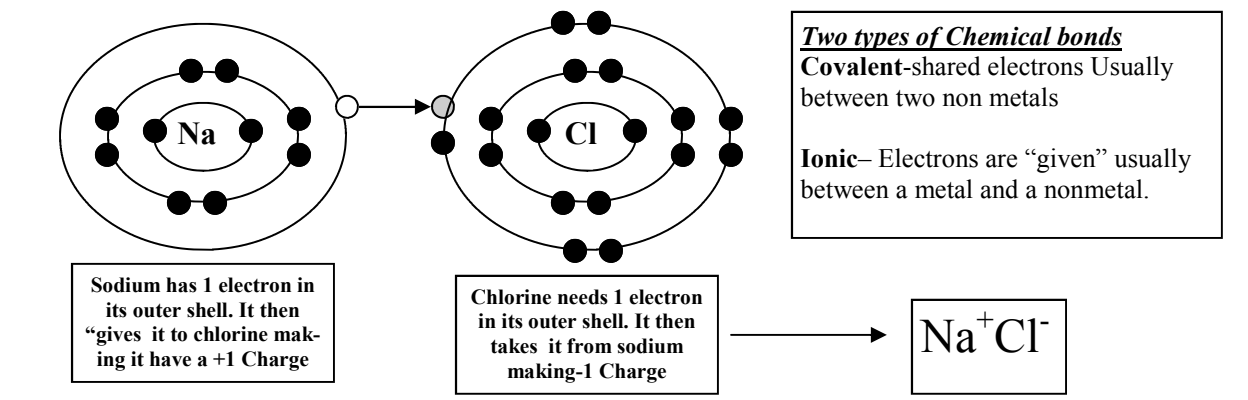
## Unit 3 Compounds Continued p2

### Another Balanced Chemical Equation

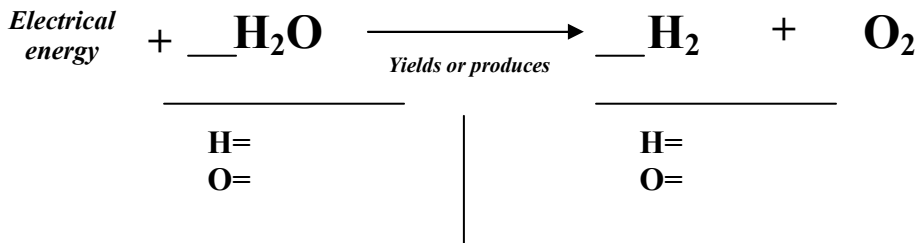


### Compounds can form *Ionic bonds*

When one atom *gives* an electron to another because of the electrostatic charge



### Balancing An Unbalanced Chemical Equation



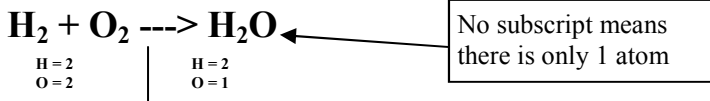
#### Steps to balancing an equation

1. List each element on both sides of the equation.
2. List the number of atoms present on each side.
3. Use coefficients only at the beginning of a formula, to balance the numbers, update the number of atoms on each side. You **MAY NOT USE SUBSCRIPTS!**
4. Add more coefficients until all numbers are balanced on both sides.

Name \_\_\_\_\_  
 Period \_\_\_\_\_

**Unit 3  
 Compounds Continued p3**

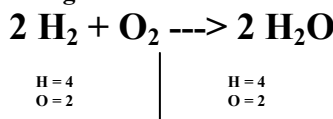
**Balancing an example equation:**



The hydrogen are balanced, but the oxygen's are not. We have to get both balanced. We put a two in front of the water molecule and this balances the oxygen.

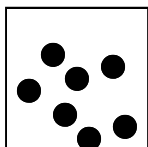


However, this causes the hydrogen to become unbalanced. To fix this, we place a two in front of the hydrogen on the left side.

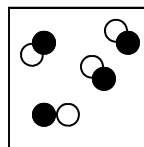


**This balances the equation!**

**Compare the two illustrations: Which represents a compound and which represents an element?**



\_\_\_\_\_



\_\_\_\_\_

**Explain why you think so:**

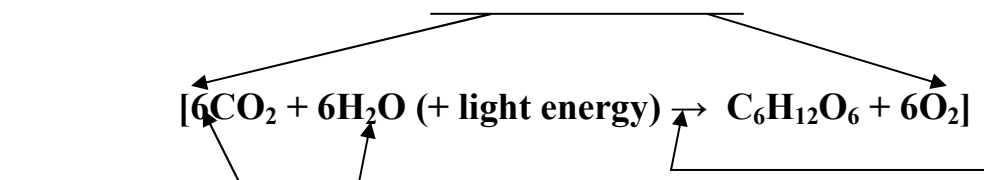
**Matching**

- |                             |       |   |
|-----------------------------|-------|---|
| 1. Subscript                | _____ | A. Letter(s) representing an element            |
| 2. Chemical Formula         | _____ | B. Number to the lower right (#atoms)           |
| 3. Coefficient              | _____ | C. Represents chemical reaction                 |
| 4. Chemical equation        | _____ | D. Reaction where electrons are <i>Given</i>    |
| 5. Covalent bond            | _____ | E. The arrow in an equation                     |
| 6. Sodium                   | _____ | F. Soft, Silvery metal                          |
| 7. Ionic bond               | _____ | G. Methods used to break down compounds         |
| 8. Light, heat, electricity | _____ | H. Chemicals on the left side of an equation    |
| 9. Chemical symbol          | _____ | I. Number used to Balance an Equation           |
| 10. Yields or produces      | _____ | J. Bond where electrons are shared              |
| 11. Reactants               | _____ | K. Electrons on the outermost shell             |
| 12. Products                | _____ | L. Using electricity to split a compound        |
| 13. Valence electrons       | _____ | M. Chemicals Produced as a result of a reaction |
| 14. Electrolysis            | _____ | N. Substance that has only one type of particle |
| 15. Pure substance          | _____ | O. Grouped symbols representing a compound      |

Name \_\_\_\_\_  
Period \_\_\_\_\_

Unit 3  
Compounds Continued p4

Fill in the blanks with the appropriate terms:



A. Subscript B. Coefficient C. Yields D. Chemical equation

List all of the chemical formulas and what compound they represent in the above equation.

\*\*\*\*\*BONUS\*\*\*\*\* What process does this formula represent? \_\_\_\_\_

Balance the following equations:

