

# Elements & Compounds

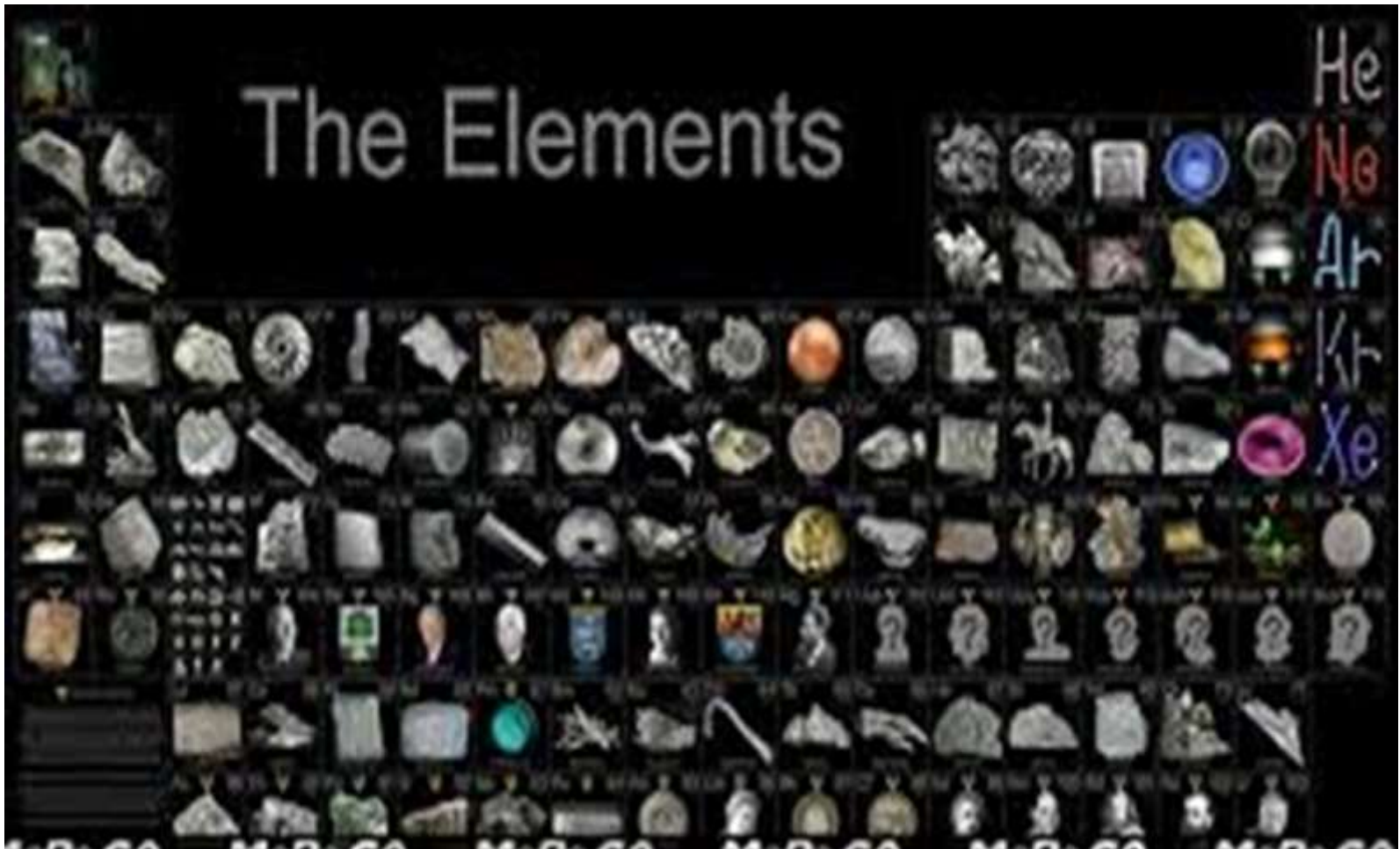
Mr. Skirbst

# Pure Substances

Made of only one kind of material and has definite properties

# Pure Substances

## Elements –



# Pure Substances

**Elements –**

simplest pure substance

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**Atoms –** basic building block of all matter (simplest part of an element)

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simplest pure substance

**Atoms –** basic building block of all matter (simplest part of an element)

**Symbols –** element shorthand

# Pure Substances

## Compounds –

- pure substance made of more than one element (chemically combined)

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- can be chemically broken down



# Pure Substances

## **Compounds –**

- pure substance made of more than one element (chemically combined)
- can be chemically broken down

**Molecule –** smallest part of a compound keeping characteristics

# Chemical Formulas

Shorthand for chemical  
substances

(ex.  $\text{H}_2\text{O}$ ,  $\text{NaCl}$ ,  $\text{CO}_2$ ,  $\text{HCl}$ )

# Chemical Formulas

Shorthand for chemical substances

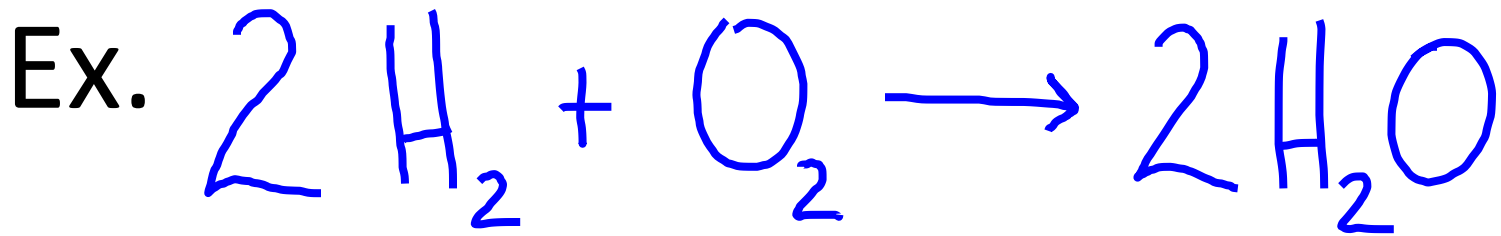
(ex.  $\text{H}_2\text{O}$ ,  $\text{NaCl}$ ,  $\text{CO}_2$ ,  $\text{HCl}$ )

**Subscript** - # of atoms



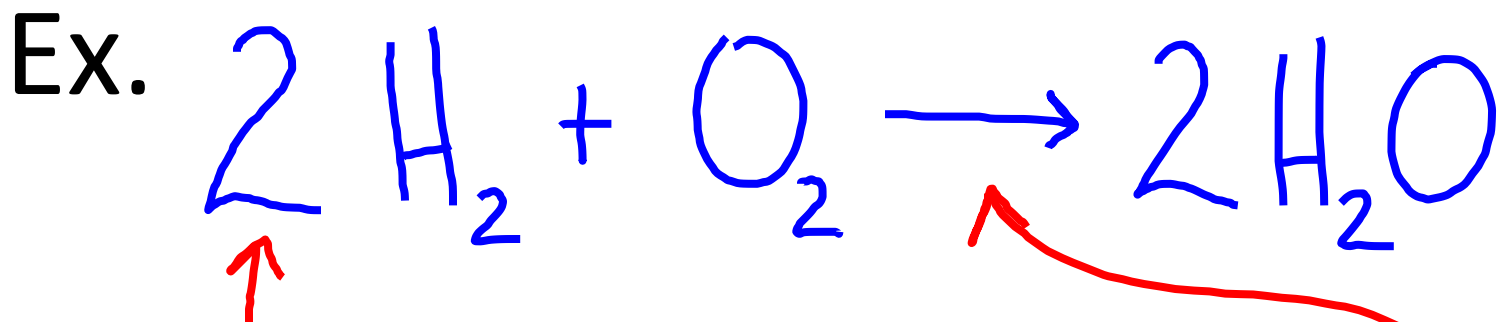
# Chemical Equations

Shorthand for chemical reaction



# Chemical Equations

Shorthand for chemical reaction



Coefficient - # of molecules

Yields – arrow indicating  
direction of reaction

# Chemical Equations



(reactants)   (yields)   (products)

substances  
that  
react  
          

substances  
that are  
produced

# Writing Formulas

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In a compound:

- symbol for “metal” first



# Writing Formulas

In a compound:

- symbol for “metal” first

(left side of periodic table)

# Writing Formulas

In a compound:

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# Writing Formulas

In a compound:

- symbol for “metal” first

(left side of periodic table)

- symbol for “non-metal” second

(right side of periodic table)

- non-metal ends in “-ide”

# Writing Formulas

Examples:

sodium chloride

# Writing Formulas

Examples:

sodium chloride

NaCl

# Writing Formulas

Examples:

sodium chloride

NaCl

iron oxide

# Writing Formulas

Examples:

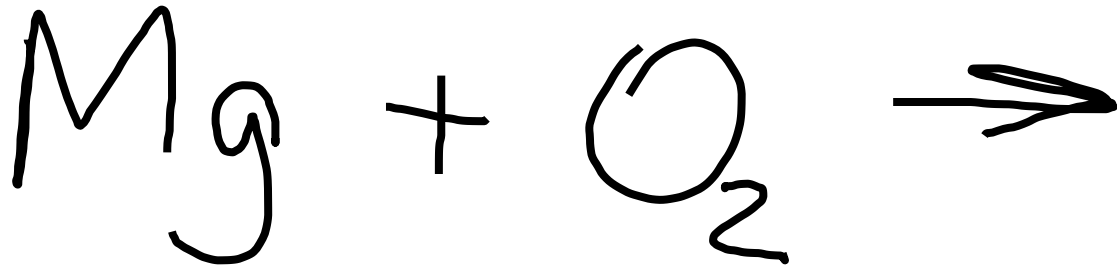
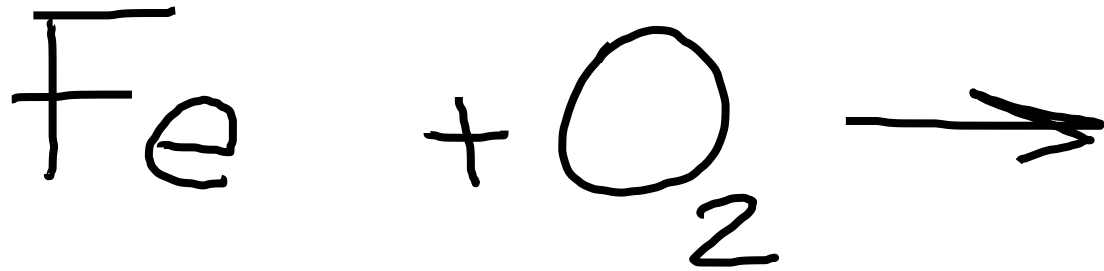
sodium chloride

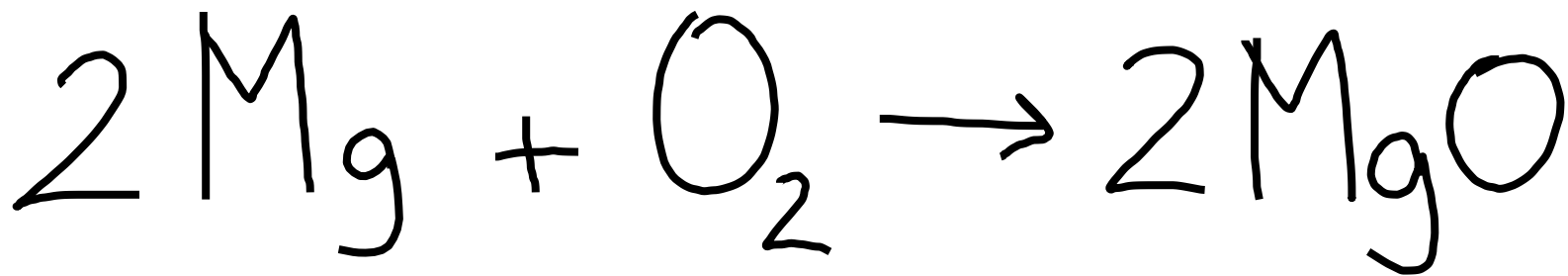
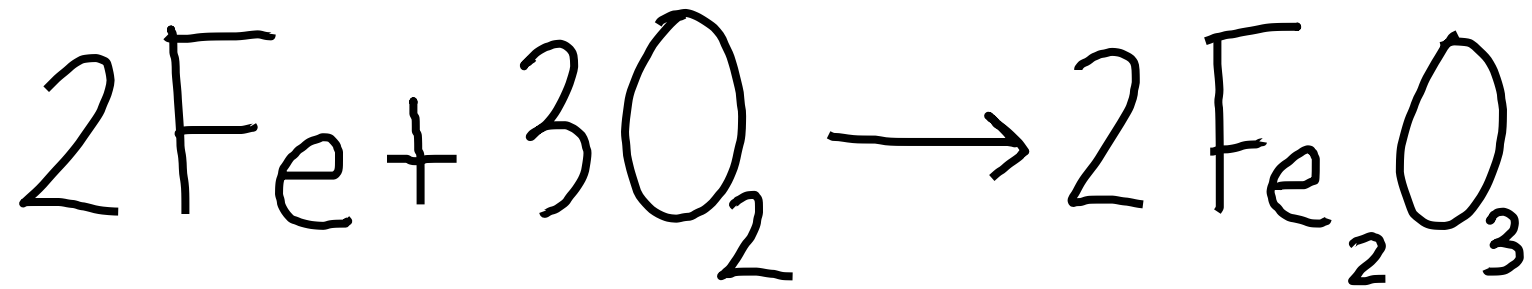
NaCl

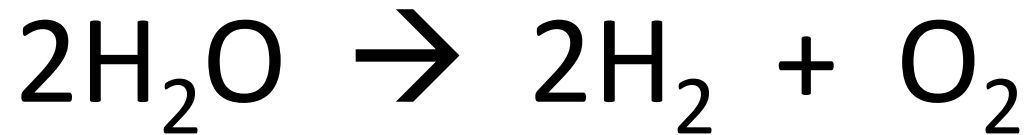
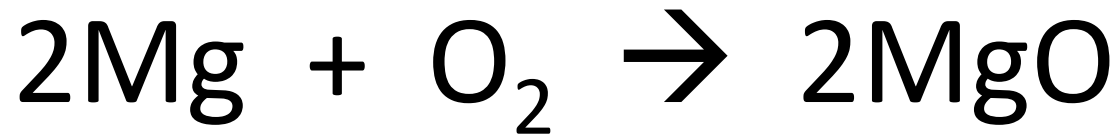
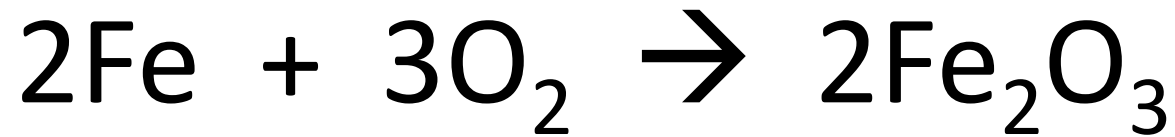
iron oxide

FeO<sub>2</sub>









# Minecraft Explains

# Element Square

Atomic Number

**SYMBOL**

*Element Name*

Atomic Mass