

Chemical Reactions Review

Look at all Labs and Worksheets from this unit!! Use the equations web practice links.

Define physical property and chemical property?

What is the difference between a physical and a chemical properties?

Give some examples of each type.

How are physical and chemical properties linked to how resources are used. Be able to give specific examples.

Define physical change and chemical change?

List the characteristics of each type of change.

Give some examples of each.

What are some indicators that you might see, smell, etc. of a chemical change?

What does the Law of Conservation of Matter state?

How is that related to balancing equations?

How is that related to resources? (For example, our sample of Cu that we reacted and retrieved.)

Be able to interpret a reaction and do an "atom inventory" (count atoms)

How many atoms are in a given molecule? For example $\text{Ca}(\text{OH})_2$ has how many calcium atoms, how many oxygen atoms and how many hydrogen atoms?

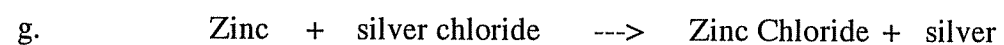
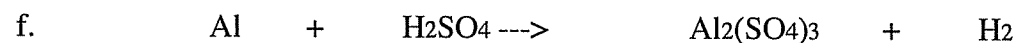
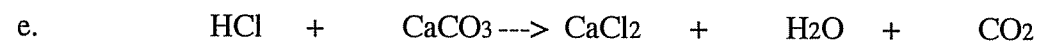
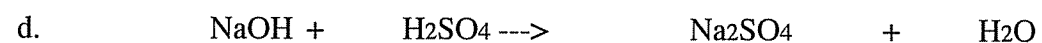
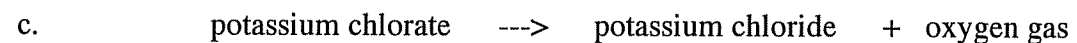
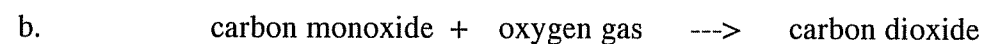
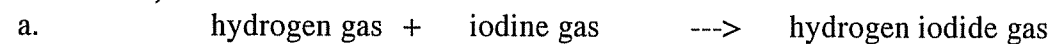
What is a reactant and where are they shown in an equation?

What is a product and where are they shown?

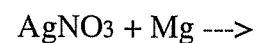
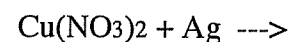
How do you indicate the physical state of the reactant and products?

A delta sign over the arrow indicates what?

Balancing the following equations: (THESE ARE NOT THE ONLY ONES YOU SHOULD TRY!!)



Be able to use an activity series to predict whether a single replacement reaction will occur. Tell what you would see.



Copper solid is placed in a solution of zinc(II) nitrate.

Be able to use a solubility chart to predict whether a double replacement reaction will occur. Tell what you would see. What is the precipitate?

Calcium nitrate + sodium carbonate

Iron(II) oxide + potassium hydroxide

Ammonium chloride + magnesium sulfate

Silver sulfite + aluminum acetate

Discuss resources and how they are related to Law of Conservation of Matter.

What are renewable resources? Give examples.

What are nonrenewable resources? Give examples.

Where do we get metals from? Are they usually seen in nature uncombined? Of the ones in your single replacement lab, which one was most likely to be seen uncombined? How did you know?

Discuss what we mean by "running out of" a resource. Do we ever run out of the atoms? Molecules? Be able to give specific examples. How does that relate to Law of Conservation?

What can we do to reduce the amount of resources that we make into waste. Do we generate a lot of waste? Does that amount seem to be going up or down?

How do we modify the resources we have to fit the ways that we use them?

Discuss Oxidation Reduction (redox) reactions:

Identify a reaction as a redox

Identify the element being reduced.

Identify the element being oxidized.

Identify the reducing agent.

Write half reactions.

How can redox reactions be used?

What are batteries?

Describe a voltaic cell.