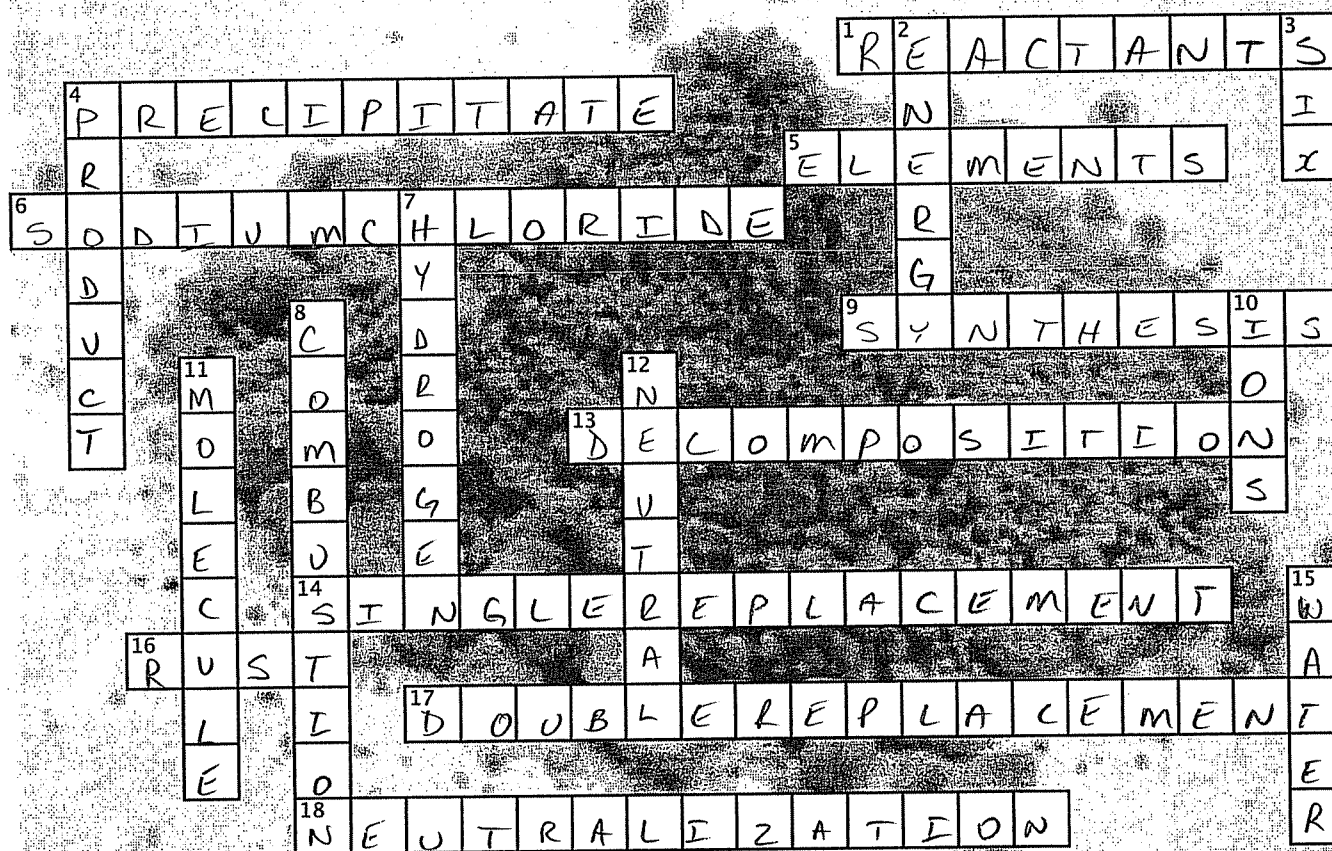


6.1 Types of Chemical Reactions



Across

- You can identify each type of chemical reaction by examining the REACTANTS.
- An insoluble solid that forms from a solution. PRECIPITATE
- When two or more reactants (A and B) combine to produce a single product (AB), for example, the letters A and B represent ELEMENTS.
- When sodium hydroxide solution is mixed with iron(III) chloride, a precipitate occurs involving the iron(III) ion. This is a double replacement reaction producing iron hydroxide and SODIUM CHLORIDE.
- Two or more reactants (A and B) combine to produce a single product (AB). SYNTHESIS
- This type of reaction is the reverse of a synthesis reaction. DECOMPOSITION
- A reactive element (a metal or a nonmetal) and a compound react to produce another element and another compound. SINGLE REPLACEMENT
- When iron reacts with oxygen, RUST is produced.
- A DOUBLE REPLACEMENT reaction usually involves two ionic solutions that react to produce two new ionic compounds.
- In a NEUTRALIZATION reaction, an acid and a base react to form a salt and water. NEUTRALIZATION

Down

- All known chemical reactions require ENERGY to break the chemical bonds in the reactants.
- Chemists have identified SIX common types of reactions.
- For ionic compounds, you can use the ion charges to predict the PRODUCT.
- Zinc metal reacts with hydrochloric acid to produce zinc chloride and HYDROGEN gas.
- The rapid reaction of a compound or element with oxygen to form an oxide. COMBUSTION
- When synthesis reactions occur between a metal and non-metal, electrons are transferred from the metal to the non-metal, producing IONS.
- To make table salt in a synthesis reaction, two atoms of sodium metal and one MOLECULE of chlorine gas react to form sodium chloride, NaCl.
- During decomposition of an ionic compound, electrons transfer back to the atoms of the metal and each element becomes electrically NEUTRAL.
- When a hydrocarbon and oxygen combust, the products are two oxides, WATER and carbon dioxide.