

Unit 4 - Chemical Reactions

- Evidence of a chemical reaction

| | | |
|----------------------|--|--------------------------------------|
| gas bubbles produced | Change in energy (endothermic or exothermic) | Precipitation occurs (a solid forms) |
| water produced | a permanent color change | a permanent odor change |

- Chemical Equations - a short-hand way of representing a reaction

reactants \rightarrow products

*yields
produces*

(s) - solid

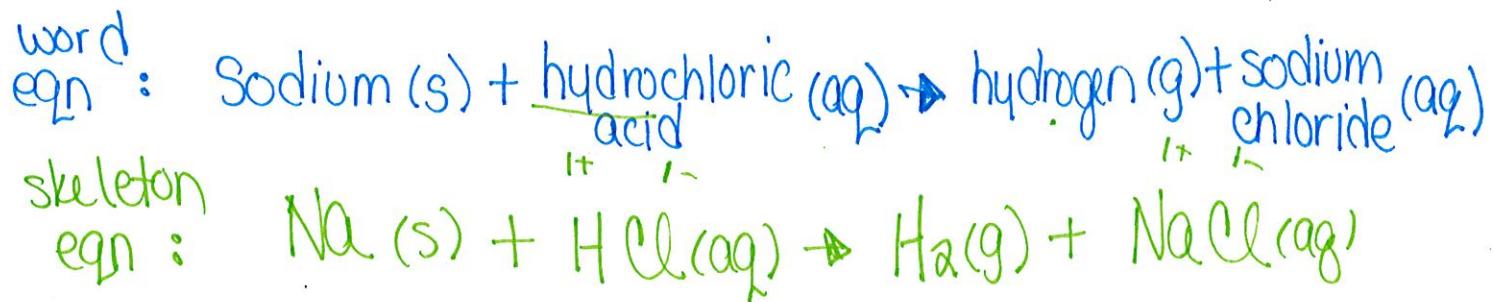
(l) - liquid

(g) - gas

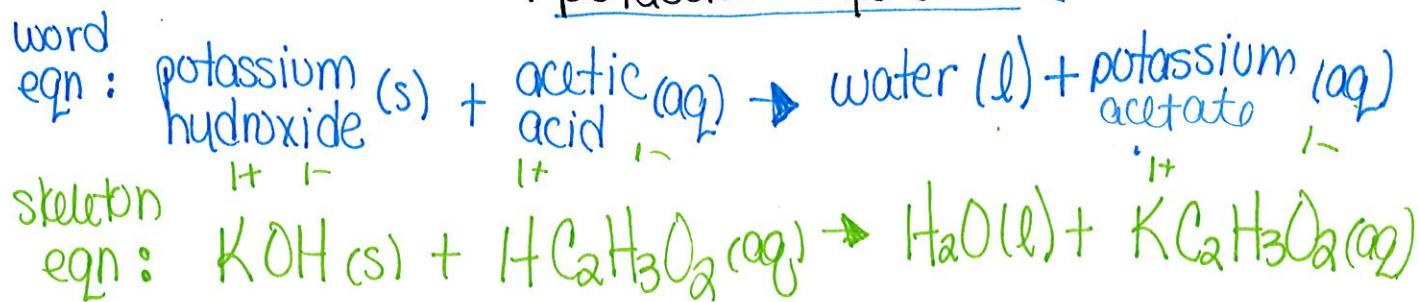
(aq) - aqueous, dissolved in water

- Word equation - use names for substances
- Skeleton equation - uses formulas for substances

Ex) R₁ Sodium metal reacts with a solution of
 R₂ hydrochloric acid to produce hydrogen gas P,
 and a solution of sodium chloride P₂



Ex) R₁ Solid potassium hydroxide reacts with a
 solution of R₂ acetic acid to produce water P and
 a solution of potassium acetate P₂



Ex) Solutions of R₁ magnesium nitrate and silver(I)
 R₂ phosphite react to produce a solution of silver(I)
 R₃ nitrate and a precipitate of magnesium phosphite P₂

