

Shedding Light on Acids and Bases Episode 3: Neutralization Name: _____

Part A
Part B

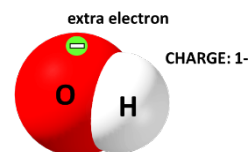
- Carbonates, like bi-carb soda, are examples of _____.
- Write the chemical formulas of the following bases.

Bases	
Chemical Name	Chemical Formula
sodium hydroxide	
lithium hydroxide	
calcium hydroxide	
sodium hydrogen carbonate	

- Write the chemical equation for the reaction between hydrochloric acid and sodium hydroxide.
in words: _____
in symbols: _____
- Write (in words) the general equation for the reaction between any acid and any base.

- Reactions between acids and bases are called neutralization reactions, but if you mix an acid and a base the resulting solution may still be acidic or basic. Why? _____

- All bases either contain hydroxide ions or they chemical react with _____ to produce hydroxide ions.
- What is a hydroxide ion?



- If sodium hydrogen carbonate dissolves in water, small amounts of hydroxide ions are produced. Write the chemical equation (in symbols).

- Hydroxide ions are also produced if a metal oxide dissolves in water. Complete the following equations:
in words: sodium oxide + water → _____
in symbols: _____
in words: _____ + water → lithium hydroxide (Hint: Li and Na react in a similar way)
in symbols: _____ + _____ → LiOH

10. APPLICATION QUESTION.

Complete the following equations. (You may want to re-read your answer to Q4.)

sodium oxide + hydrochloric acid → _____ + _____

NaO + HCl → _____ + _____

- Litmus paper is an “indicator”. Describe how litmus paper can be used to safely tell the difference between an acid and a base. _____

- Why is universal indicator a more useful indicator than litmus? _____

Part C