

## Section 5.2

### Salts

# Check Your Understanding

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### Checking Concepts

1. What is the definition of a salt?
2. What is neutralization?
3. When metal oxides react with water, do they produce an acid or a base?
4. When non-metal oxides react with water, do they produce an acid or a base?
5. Which alkali metal will react more vigorously with an acid, cesium or lithium?
6. List the following metals in order from most reactive with acids to least reactive with acids: sodium, gold, zinc, copper.
7. Why is calcium carbonate added to some lakes in eastern Canada?
8. State what gas is produced in the reaction of:
  - (a) acids with metals
  - (b) acids with carbonates

## Understanding Key Ideas

9. State whether each of the following is an acid, a base, a salt, or none of these.

(a) HCl

(b) NaOH

(c) Al(OH)<sub>3</sub>

(d) H<sub>2</sub>O

(e) MgCl<sub>2</sub>

(f) H<sub>3</sub>PO<sub>4</sub>

(g) Na<sub>2</sub>SO<sub>4</sub>

10. Complete and balance the following reactions.

(a) \_\_\_HF + \_\_\_NaOH →

(b) \_\_\_H<sub>3</sub>PO<sub>4</sub> + \_\_\_KOH →

(c) \_\_\_H<sub>2</sub>SO<sub>4</sub> + \_\_\_Ca(OH)<sub>2</sub> →

(d) \_\_\_CH<sub>3</sub>COOH + \_\_\_NaOH →

(e) \_\_\_H<sub>2</sub>CO<sub>3</sub> + \_\_\_Al(OH)<sub>3</sub> →

11. If magnesium metal is burned in air and the white powder produced is dissolved in a solution containing litmus, what colour will the litmus turn?

12. A sample of powdered yellow sulphur burns in air. The gas that is produced is dissolved in a solution of bromothymol blue. What colour will the bromothymol blue turn?

## ***Pause and Reflect***

Suppose you are helping to design a refinery that would refine mineral deposits into lead metal and zinc metal. The mineral deposits contain sulphur, and the refining (smelting) process will produce sulphur oxides. What environmental concerns would you need to consider? How could you deal with the concerns in an environmentally friendly way?