The National Orthodox School Shmaisani

Science Worksheet #5

Understanding Salts/ Exploring the reactions of acids with metals

Name: _**Answer Key**__ Grade **8 ( )**

Date: **/12/2022**

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1 – Complete the table below with information about the salts listed.

Salt	Chemical formula	Which acid and alkali can produce it	Uses
Sodium chloride	**NaCl**	**HCl and NaOH**	**In food, on icy roads, producing chlorine**
Magnesium chloride	**$MgCl_2$**	**HCl and $MgOH_2$**	**In cement**
Iron sulfate	**$FeSO_4$**	**H_2SO_4 and $FeOH_2$**	**Killing moss**
Calcium sulfate	**$CaSO_4$**	**H_2SO_4 and $CaOH_2$**	**Plaster of Paris**

2- The first part of the name of a salt comes from the alkali, usually from the metal in the alkali. The second part of the name of a salt comes from the acid.

Match each of the following neutralisation reactions with the salt produced from the box below.

a) Hydrochloric acid + magnesium hydroxide ⟶ **Magnesium chloride**

b) Hydrochloric acid + sodium carbonate ⟶ **Sodium chloride**

c) Sulfuric acid + calcium carbonate ⟶ **Calcium sulfate**

d) Sulfuric acid + sodium hydroxide ⟶ **Sodium sulfate**

e) Nitric acid + calcium hydroxide ⟶ **Calcium nitrate**

Salts produced:

calcium nitrate	calcium sulfate	magnesium chloride	sodium sulfate	sodium chloride

3- Choose the correct answer.

- Identify all the observations from those below that would suggest that a chemical reaction had taken place.

a- Bubbles of gas

b- There are no new products

c- The reaction can be reversed

d- Colour change

e- The test tube feels warmer

- Metals like gold and silver are used to make jewelry because they don't react with acids. They are considered precious metals because they are

a- Highly reactive

b- reactive

c- unreactive

d- expensive

- Name the two products of the reaction of zinc with hydrochloric acid.

a- $H_2O + H^+$

b- $H_2O + ZnCl_2$

c- $ZnCl_2 + H^+$

d- $H^+ + HCl$

- When iron reacts with sulfuric acid. The products are a salt and hydrogen.
The best equation to show this reaction is

a- sulfuric acid + iron → iron chloride + hydrogen

b- sulfuric acid + iron → iron sulfate + hydrogen

c- sulfuric acid + iron → iron sulfate + water

d- sulfuric acid + iron → iron chloride + water