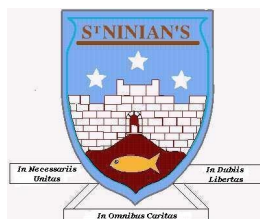


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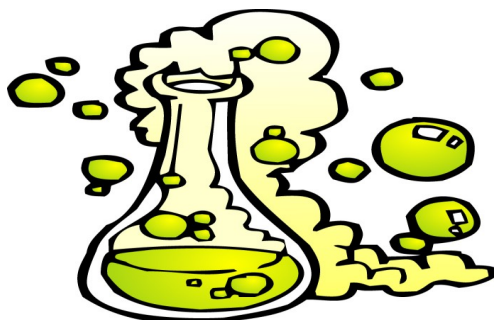


**Chemistry Department**

**National 5 Chemistry**

**Unit 1**

**Homework Booklet**



**Name** \_\_\_\_\_

**Teacher** \_\_\_\_\_

<b>Homework</b>	<b>Mark</b>	<b>%</b>	<b>Parental Signature</b>
<b>1</b>			
<b>2</b>			
<b>3</b>			
<b>4</b>			
<b>5</b>			
<b>6</b>			
<b>7</b>			
<b>8</b>			
<b>9</b>			
<b>10</b>			
<b>11</b>			
<b>12</b>			
<b>13</b>			
<b>14</b>			
<b>15</b>			
<b>16</b>			

# N5 Chemistry

## Unit 1: Chemical Changes & Structure

### Homework 1.1

1. Which of the following compounds contains only two elements?

- A Magnesium hydroxide
- B Magnesium phosphate
- C Magnesium sulphite
- D Magnesium nitride

Answer \_\_\_\_\_

2. Which of the following changes is **not** an example of a chemical reaction?

- A Ice melting
- B Iron rusting
- C Methane burning
- D Neutralising an acid

Answer \_\_\_\_\_

3. Which of the following **always** occurs in a chemical reaction?

- A A gas is given off.
- B A solid is produced.
- C A new substance is produced.
- D A colour change takes place.

Answer \_\_\_\_\_

4. Which of the following is an element?

- A Water
- B Carbon dioxide
- C Fluorine
- D Petrol

Answer \_\_\_\_\_

5. Which of the following is a metal?

- A Sulfur
- B Neon
- C Silicon
- D Potassium

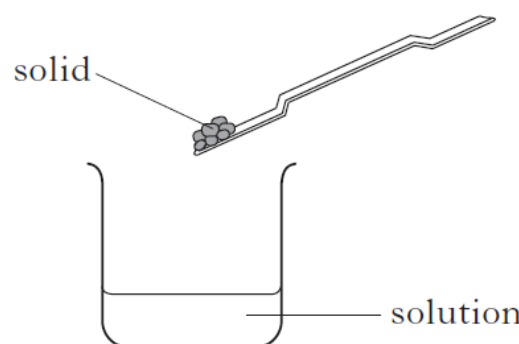
Answer \_\_\_\_\_

6. What of the following elements was the **first** to be discovered?

- A Sodium
- B Silicon
- C Iron
- D Helium

Answer \_\_\_\_\_

7.



Which of the following would **not** be evidence of a chemical reaction when the solid is added to the solution?

- A A colour change
- B A gas being given off
- C The temperature rising
- D The solid disappearing

Answer \_\_\_\_\_

8. Which line in the table shows the approximate percentage composition of air?

	Nitrogen	Oxygen	Carbon dioxide	Noble gases
A	78	21	0.03	1
B	21	78	1	0.03
C	1	21	78	0.03
D	0.03	78	1	21

Answer \_\_\_\_\_

8

9. Some orange ammonium dichromate crystals were placed on a heat mat and touched with a hot spatula. Immediately a green powder was thrown up into the air, like a volcano. The centre of the substance glowed red hot for about 20 seconds, after which all that was left was a green powder. Give **three** pieces of evidence which suggest a chemical reaction had taken place.

i) \_\_\_\_\_

\_\_\_\_\_

ii) \_\_\_\_\_

\_\_\_\_\_

iii) \_\_\_\_\_

\_\_\_\_\_

3

10. Cool packs can be used to treat some sports injuries.



The pack contains solid ammonium nitrate and water in two separate compartments. When a pack is squeezed the ammonium nitrate dissolves in the water forming a solution. This results in a drop in temperature.

- a) What term is used to describe a reaction in which there is a drop in temperature?

\_\_\_\_\_

1

- b) What name is given to a liquid, such as water, which can be used to dissolve substances?

\_\_\_\_\_

1

- c) The change in temperature in the cool pack can be calculated using the equation below.

$$\text{Temperature change} = \frac{\text{energy change (kJ)}}{\text{mass of water (kg)} \times 4.2}$$

Calculate the temperature change using the following information.

Energy change (kJ)	6.72
Mass of water (kg)	0.2

Answer \_\_\_\_\_ °C

1

Total Marks 14