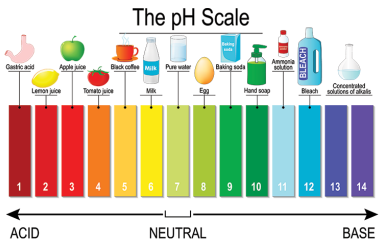
Firrhill High School

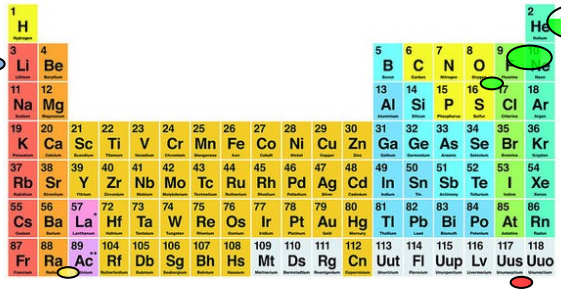
C2: The Periodic Table

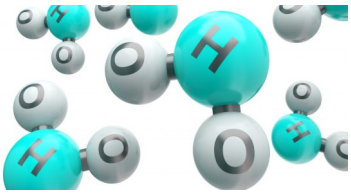
curriculum for excellence

Effective Contributors

Responsible Citizens







Successful Learners

Confident Individuals

Homework	Due	Comment
Homework 1 The Elements		
Homework 2 Properties of the Groups		
Homework 3 Word Equations		
Homework 4 Acids and Alkalis		

Name: **Class:** **Teacher:**

1. Elements

1. What is an element? _____

2. What is an atom?_____

3. The elements in the table are shown in alphabetical order.

Mark each element on the timeline to show when it was discovered.

Name of element	Date of discovery
aluminium	1825
arsenic	1649
bromine	1826
calcium	1808
einsteinium	1952
cobalt	1735
gold	before Christian era
helium	1895
hydrogen	1766
oxygen	1774
phosphorus	1669
potassium	1807
radium	1898
silver	before Christian era
tungsten	1783
zinc	about 1480

Before 1400
1400
1450
1500
1500
1550
1600
1650
1700
1750
1800
1850
1900
1950
2000
Present day

4. Name following elements using the Periodic Table

i) Mg _____ ii) O _____ iii) K _____

ii) Cu _____ v) F _____ vi) He _____

2. Which elements above are metals?

_____

3. Which elements above are non-metals?

_____

2. Properties of the Groups

1. Match each element to its group.

Element	*Group*
Sodium	noble gases
Iron	halogens
Chlorine	alkali metals
Neon	transition metals

2. Amy put some metals A,B,C,D in water.
Look at the times taken for the metals to react completely with the water.

Metal	Time (seconds)
A	15
B	35
C	5
D	No reaction

Which is the most reactive metal?_____

How could Amy have made sure this was a fair test?

_____
_____
_____

How could she have made her results more reliable?

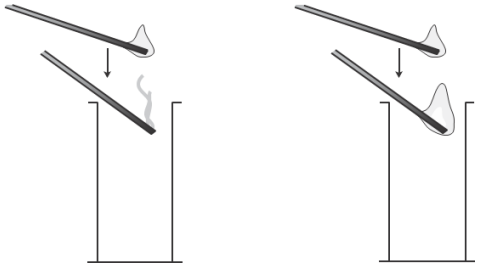
_____
_____
_____

3. Match up each group to the properties (describing words) of that group.

Group	**Properties**
noble gases	Very reactive
halogens	Hard, usually shiny, conductive
alkali metals	Very unreactive
transition metals	Highly reactive with water and oxygen

3. Word Equations

1. a) Which diagram shows a jar of oxygen?



b) Explain your answer.

_____

_____

c) What would happen to a splint if the jar was full of hydrogen?

_____

_____

2. You completed an experiment where magnesium reacted with oxygen.

a) Explain how you carried out this experiment and how you could tell a chemical reaction had taken place.

_____

_____

_____

B) Write a word equation for this reaction

_____ + _____ ⟶ _____

3. Fill in the missing words in the word equations below.

_____ + oxygen → carbon dioxide

lead + oxygen → _____ oxide

copper + oxygen → copper _____

tin + _____ →tin chloride

sodium + chlorine → _____

4. Acids and Alkalis

1. Use the information in the table to label the pH scale, you should then use colouring pencils to show the colour that universal indicator would turn in each substance.

Substance	pH
Lemon Juice	2
Water	7
Oven Cleaner	13
Milk	6
Toothpaste	9
Orange juice	5
Sodium Hydroxide	14

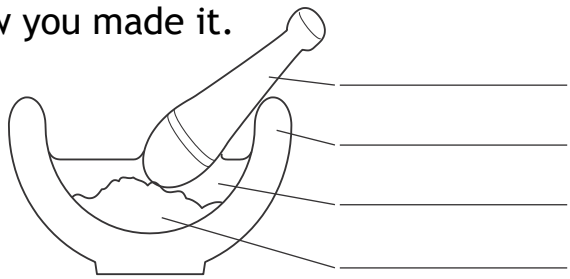
1	2	3	4	5	6	7	8	9	10	11	12	13	14

2. On the pH scale above, label which numbers are acid, neutral and alkali.

3. You completed an experiment to make your own indicator.

A) Label the diagram below to show how you made it.

pestle
water
red cabbage leaves
mortar



B) What is a chemical indicator?

_____

_____

C) How did you test your red cabbage indicator?

What happened as a result?

_____

_____