

Add the missing words to complete the descriptions of the reactions of the first three alkali metals with water.

Alkali metal: Lithium

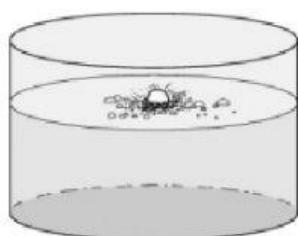
Symbol: \_\_\_\_\_

Group 1

How stored: Under oil

Reaction with water: Floats and fizzes forming a gas

Word equation for reaction with water:



Alkali metal: \_\_\_\_\_

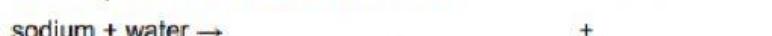
Symbol: Na

Group: \_\_\_\_\_

How stored: \_\_\_\_\_

Reaction with water: Melts into a ball and fizzes forming a \_\_\_\_\_

Word equation for reaction with water:



Alkali metal: \_\_\_\_\_

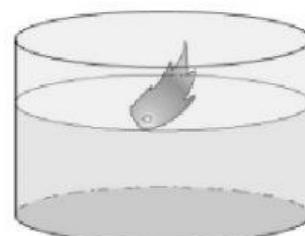
Symbol: K

Group 1

How stored: Under oil

Reaction with water: Catches \_\_\_\_\_ and forms a gas

Word equation for reaction with water:



Draw lines to match up the correct starts and ends of these sentences about elements reacting with oxygen.

The reaction of zinc with oxygen ...

... is sulfur dioxide.

When elements react with oxygen ...

... it is reacting with oxygen.

When an element burns in air ...

... produces zinc oxide.

The product of sulfur and oxygen ...

... compounds called oxides form.

A group of students obtained the following results when carrying out some research into the pH of different metal and non-metal oxides from the same period of the periodic table.

Element	Sodium	Magnesium	Aluminium	Silicon	Phosphorus	Sulfur	Chlorine	Argon
Group in periodic table	1	2	3	4	5	6	7	0
Formula of oxide	$\text{Na}_2\text{O}$	$\text{MgO}$	$\text{Al}_2\text{O}_3$	$\text{SiO}_2$	$\text{P}_2\text{O}_5$	$\text{SO}_2$	$\text{OCl}_2$	
pH in water	12	10	7	7	3	4	5	

a Describe the trend in pH of oxides across the periodic table from group 1 to group 0.

b Describe the types of solution, acidic, alkaline or neutral, formed by metal oxides and non-metal oxides.

c Suggest a reason for there being no formula or result for argon.

An outline of a modern periodic table is shown below.

(iii)	(iv)								
(v)									

a Which of the elements are non-metals? Tick one box.

A (i) and (ii)

B (iii), (iv) and (vi)

C (iii), (iv) and (v)

D (i), (ii) and (vi)