Talking:

Chemistry lesson: The Periodic table

The Group-I metals:

- are called 'alkali metals'
- because they form 'alkali' when react with water.
- hydrogen gas is also formed.

Trends in their physical properties:

Lithium

Sodium

Potassium

Rubidium

Caesium

softness increases



melting/ boiling points decreases

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Chemistry lesson:

Group-1 metals ---> The alkali metals

- the most reactive metals

- What do they form when they react with water?

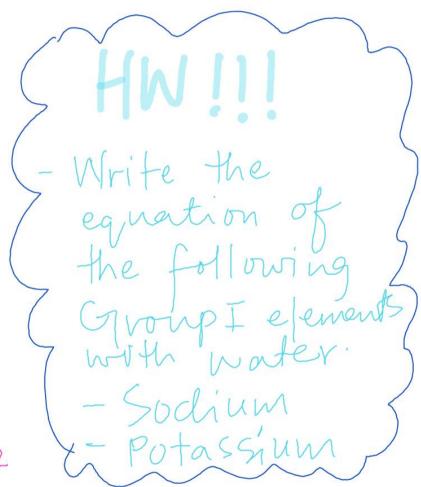
Example:

Word equation:

Lithium + water ----> lithium hydroxide + hydrogen

Chemical/ symbol equation:

 $2Li + 2H_2O \rightarrow 2LiOH + H_2$



Chemical properties of Group-I elements:

As we go down the group, reactivity increases.

When they react with water, they form alkali and hydrogen.

What you see, when a small piece of metal is put into water:

Li ---> fizzes slowly ----> a few bubbles

Na ---> fizzes quickly ----> many bubbles

K ---> fizzes violently ---> even more bubbles

Rb ---> sparks everywhere

Cs ---> a violent explosion

Physical Properties:

Li

Na

K

reactivity increases down the group electronic configuration 2,1 2,8,1 2,8,8,1

Density increases down the group

0.97

Melting and boiling points decrease down the group

M. P°C

98

63

B.P 1347

883

760

harding

LI	reaction with O2 - burns with a strongly red-tinged flame - produces a white solid	reaction with water - fizzes steadily - gradually disappears	reaction with CI2 - white powder is produced - stick/ settle to the sides of the container
Na	- strong orange flame - produces white solid	Fizzes rapidlymelts into a balldisappears quickly	 burns with a bright yellow flame clouds of white powder are produced settle on the sides of the container
K	- large pieces produce lilac flame -smaller ones make solid immediately	Ignites with sparksa lilac flamedisappears very quick	reaction is even more vigorous than with sodium y

Chemitry lesson:

Chemical reactions/ properties of Group-I metals (The alkali metals)

Group I metals react with water to form an alkali and hydrogen gas.

Word equation:

Chemical/ formula equation:

sodium + water ----> sodium hydroxide + hydrogen
$$2Na + 2H_2O \rightarrow 2NaOH + H_2$$

potassium + water ----> potassium hydroxide + hydrogen $2K + 2H_2O \rightarrow 2KOH + H_2$

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