Reactions of group 1 metals with water

Introduction

Your teacher will show you the reactions of lithium, sodium and potassium with water.
Make notes on what you see.

Questions and tasks

1. Complete the table below using your notes to help you.

Observation	Lithium	Sodium	Potassium
How stored			
Colour			
Shiny or dull when cut			
Floats or sinks on water			
Colour of flame	red		

2. Underline the correct words in each **bold** pair or trio in the following sentences:

   Lithium, sodium and potassium are very **easy** / **difficult** to cut with a scalpel.

   Lithium / **potassium** sets on fire easily when it reacts with water.

   When these metals react with water, they make a gas called **oxygen** / **hydrogen** / **carbon dioxide**.

   We test for this gas using a **lighted** / **glowing** splint which **relights** / **pops**.

   At the end of experiment, the universal indicator in the water is **red** / **green** / **purple**.

   When these metals react with water, they make **acidic** / **alkaline** / **neutral** solutions.

3. When **lithium** reacts with **water**, it makes **lithium hydroxide** and **hydrogen**.

   The word equation for this reaction is: lithium + water → lithium hydroxide + hydrogen

   a) Sodium reacts with water in a similar way. Complete the word equation below:

      sodium + __ __ __ __ __ → sodium hydroxide + __ __ __ __ __ __ __ __

   b) Potassium also reacts with water in a similar way. Write the word equation in the box below:

4. Write the metals in order of their **reactivity**. Put the least reactive metal first.

   _____ least reactive

   _____ ↓

   _____ most reactive