

**Task 1**

Practise writing chemical equations using the flower hexagons below.

**Lithium compounds**

1. lithium + fluorine → lithium fluoride

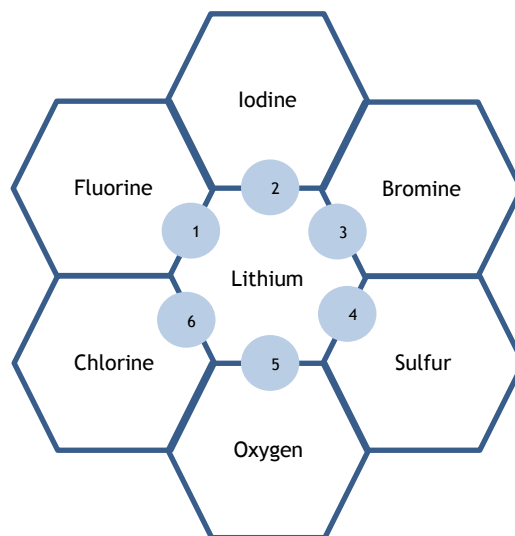
2.

3.

4.

5.

6.



**Iron compounds**

1. iron + fluorine → iron fluoride

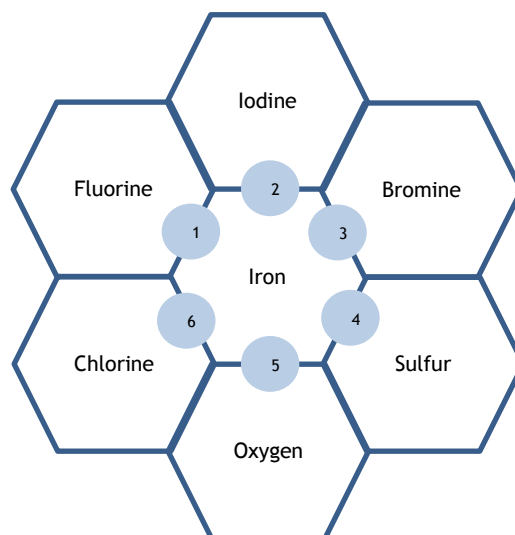
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**Copper compounds**

1.

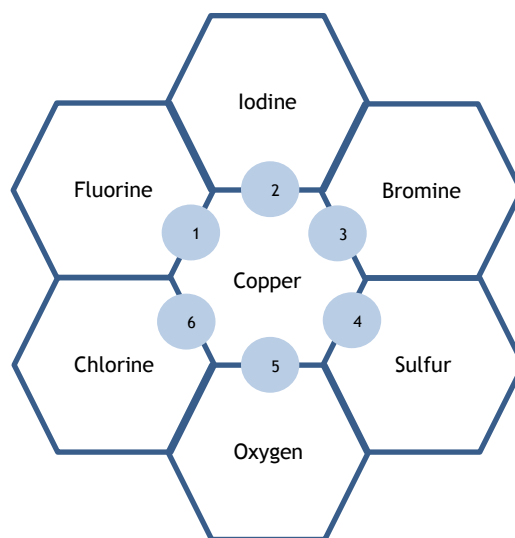
2.

3.

4.

5.

6.



**Task 2**

Read the descriptions below of different chemical reactions.  
Use the information to write a word equation for each reaction.

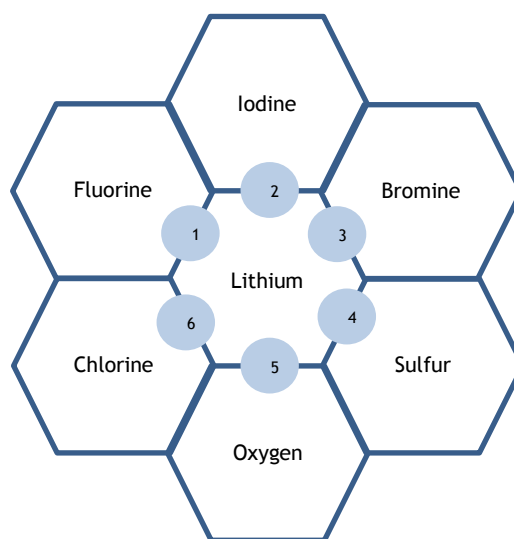
1. A mixture of flour, sugar, and eggs is baked to make a delicious batch of biscuits.
2. A small piece of magnesium was dropped into hydrochloric acid. Hydrogen gas and magnesium chloride was produced.
3. Hydrogen and oxygen react together to form water.
4. Methane burns in air (oxygen) to produce carbon dioxide and water.
5. Chlorine and methane react to form chloromethane and hydrogen chloride.
6. A small piece of iron was left in outside for a week and become rusty. Rust is called iron oxide.
7. Copper and sulfur were heated over a Bunsen burner. At the end of the investigation, the copper had a bluish coating on the surface.
8. After copper sulfate (blue liquid) reacts with magnesium a small amount of an orange substance appears at the bottom of the beaker and the solution becomes clear.
9. A small piece of magnesium is held over a Bunsen flame. After producing a very bright light a white ash is left over.
10. A small piece of sodium was dropped into some water. The sodium formed a ball, fizzed, and moved across the surface of the water. A gas was produced that popped with a lighted splint, but the sodium could no longer be seen. When the liquid was tested it turned Universal indicator purple.
11. When living things respire their cells use oxygen and a sugar called glucose. These react together to release energy for the organism. Carbon dioxide and water are produced as waste products. During photosynthesis, this reaction is reversed. (Show both equations).
12. Hydrogen peroxide and a manganese catalyst are added to a beaker. A drop of washing up liquid is added (only to form a foamy lather, it does not play a part in the reaction). Lots of bubbles start to form and when a glowing splint is put into the foam it relights.



## Answers: Task 1

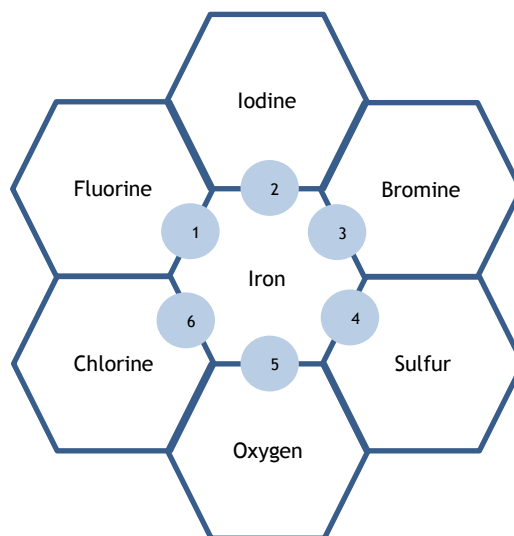
## Lithium compounds

1. lithium + fluorine → lithium fluoride
2. lithium + iodine → lithium iodide
3. lithium + bromine → lithium bromide
4. lithium + sulfur → lithium sulfide
5. lithium + oxygen → lithium oxide
6. lithium + chlorine → lithium chloride



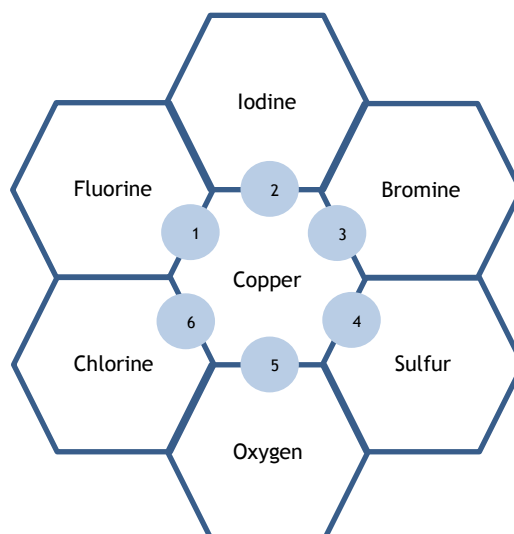
## Iron compounds

1. iron + fluorine → iron fluoride
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5. iron + oxygen → iron oxide
6. iron + chlorine → iron chloride



## Copper compounds

1. copper + fluorine → copper fluoride
2. copper + iodine → copper iodide
3. copper + bromine → copper bromide
4. copper + sulfur → copper sulfide
5. copper + oxygen → copper oxide
6. copper + chlorine → copper chloride



## Answers: Task 2

1.	flour + eggs + sugar → biscuits
2.	magnesium + hydrochloric acid → hydrogen gas + magnesium chloride
3.	hydrogen + oxygen → water
4.	methane + oxygen → carbon dioxide + water
5.	chlorine + methane → chloromethane + hydrogen chloride
6.	iron + oxygen → iron oxide
7.	copper + sulfur → copper sulfide
8.	copper sulfate → copper + magnesium sulfate
9.	magnesium + oxygen → magnesium oxide
10.	sodium + water → hydrogen + alkali (sodium hydroxide)
11.	Respiration: glucose + oxygen → carbon dioxide + water (+ energy released) Photosynthesis: carbon dioxide + water $\xrightarrow{\text{light energy}}$ glucose + oxygen
12.	hydrogen peroxide → oxygen + water