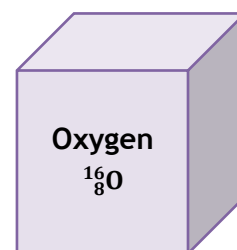
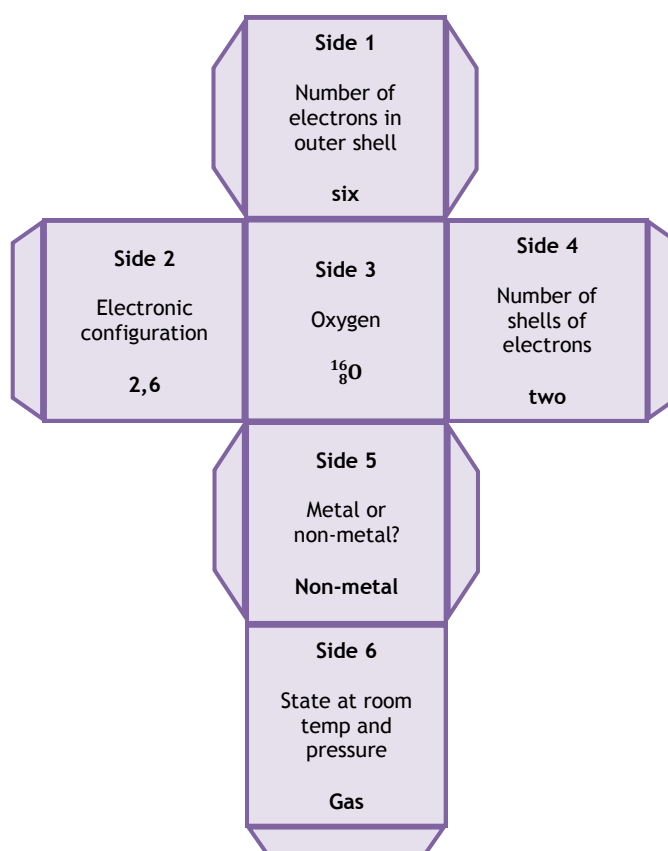


**Instructions**

For this activity you should work in groups. Each group will need a copy of the periodic table of elements.

For each of the first twenty elements from hydrogen ( ${}^1_1\text{H}$ ) to calcium ( ${}^{40}_{20}\text{Ca}$ ) you are going to construct an information cube to focus on patterns and properties of these elements.

First, you will need to a template for a cube as shown below.


**Example for oxygen**


Next write the following information on the six sides of the cube for the element in question:

**Side 1:** Number of electrons in outermost shell

**Side 2:** Electronic configuration

**Side 3:** Name of element

**Side 4:** Number of shells of electrons

**Side 5:** State if metal or non-metal

**Side 6:** Give its state at room temperature and pressure.

You will need to repeat the procedure for the first twenty elements so you have 20 cubes.

Then arrange all 20 cubes in order of increasing atomic number.

Arrange the cubes so the **same numbered side** is facing upwards. This way you can identify patterns across the periodic table more clearly. Repeat with other same sides facing upwards to identify further patterns.

Cube template

