

# Qualification Unit

This unit forms part of a regulated qualification.

**Unit Title:** Elements and Compounds

**Unit Reference Number:** Y/618/3225

**Level:** Level Two

**Credit Value:** Three (3)

**Minimum Guided Learning Hours:** 24

Learning Outcome (The Learner will):	Assessment Criterion (The Learner can):
<p>1. Recognise the structure of the atom</p>	<p>1.1 Identify and give the relative charge and mass of:</p> <ul style="list-style-type: none"> <li>a) The nucleus</li> <li>b) Electrons</li> <li>c) Protons</li> <li>d) Neutrons</li> </ul>
	<p>1.2 Give a definition of:</p> <ul style="list-style-type: none"> <li>a) Relative atomic mass</li> <li>b) Electronic charge</li> <li>c) Isotopes</li> <li>d) Ions</li> </ul>
	<p>1.3 Calculate the number of protons, neutrons and electrons in a given atom or ion</p>
	<p>1.4 Calculate relative atomic mass of an element given the percentage abundance of its isotopes</p>
<p>2. Be able to read the modern periodic table</p>	<p>2.1 Identify periods and groups including metals and non-metals on the periodic table identify:</p> <ul style="list-style-type: none"> <li>a) Alkali metals</li> <li>b) Halogens</li> <li>c) Nobel gases</li> </ul>
	<p>2.2 Write the electron arrangement for common elements</p>

	2.3 Outline common trends within groups and relate this to electron arrangement
3 Know the types of chemical bonding	3.1 Outline different types of chemical bonding: a) Ionic b) Covalent c) Metallic
	3.2 Construct a dot and cross diagram to show: a) Ionic bonding b) Covalent bonding
	3.3 Outline the bonding of carbon in natural and synthetic compounds, including an explanation of the properties of carbon allotropes related to their structure: a) Diamond b) Graphite c) Fullerenes d) Graphene
	3.4 Describe the difference between: a) Intermolecular forces b) Electrostatic attraction c) Bonding
4 Understand particles and properties	4.1 Compare and group materials together according to their properties and whether they are solids, liquids or gases
	4.2 Use the particle model to explain changes of state
	4.3 Explain how properties of the elements in Group 0,1, 7 depend on the outer shell of electrons of the atoms
	4.4 Explain the conductivity of metal in terms of delocalised electrons