

Access to Higher Education Unit

This unit forms part of an Access to HE Diploma. This is a developmental unit so is only available as ungraded.

Unit Title: Science: Introduction to Chemistry

Ungraded Unit Reference Number: UD23DEV08

Module: Developmental

Level: Two (2)

Credit Value: Three (3)

Minimum Guided Learning Hours: 30

Learning Outcome (The Learner will):	Assessment Criterion (The Learner can):
1. Understand atomic structure	1.1 Describe the structure of an atom
	1.2 Explain the differences between protons, electrons and neutrons in terms of their relative mass and electric charge
	1.3 Identify elements and isotopes from atomic and mass numbers
	1.4 Explain the difference between an element, a compound and a mixture
2. Understand the periodic table and chemical bonds	2.1 Present the electronic structures of any of the first twenty elements and relate outer electrons to group number
	2.2 Identify metals and non-metals in the s-block and p-block elements
	2.3 Explain the formation of ionic bonds between a metal and a non-metal
	2.4 Explain the formation of covalent bonds between non-metal elements
	2.5 Describe the type of bonding found in metals
	2.6 Explain the properties of metals

3. Understand chemical reactions and balanced chemical equations	3.1 Describe the chemical processes: a) direct combination b) combustion c) thermal decomposition d) neutralisation
	3.2 Demonstrate how to balance chemical equations
	3.3 Explain the principle of conservation of mass
	3.4 Identify the mass of a reactant or product from information about the masses of other reactants or products
4. Understand the factors affecting the rate of a reaction	4.1 Explain the effect of temperature, concentration and surface area of a solid on the rate of a reaction
	4.2 Interpret the results of experiments to investigate the effects of temperature, concentration and surface area of a solid on the rate of a reaction
	4.3 Describe the properties of catalysts, including enzymes
	4.4 Describe three practical applications of catalysts