

Academic Year 2015/2016

Mrs. Lucy Penenian

Grade 7

Chemistry

Content	Learning objectives
What is Matter	<ul style="list-style-type: none">-How to tell if something is matter-Indicate the mass and the volume of matter
States of matter	<ul style="list-style-type: none">-Identify solids, liquids and gases-Compare the movement of particles in solids, liquids and gases
Changes of state	<ul style="list-style-type: none">-Discover what happens when matter changes state.- Describe Freezing, Evaporation, boiling, sublimation and condensation.
Temperature and Heat	<ul style="list-style-type: none">-Explain how temperature depends on kinetic energy-Describe hoe temperature is measured-Observe how thermal expansion can be used to measure temperature.-Compare heat and temperature-Explain how energy is transferred through heat-Describe conduction, convection, and radiation
Types of mixtures	<ul style="list-style-type: none">-Describe homogenous and heterogeneous mixtures.- Give examples of homogenous and heterogeneous mixtures.
Separating the constituents of heterogeneous mixtures	<ul style="list-style-type: none">- Describe Sorting, hand and magnetic sorting- Describe Decantation by separatory funnel-Describe Filtration and indicate the efficiency of this technique.- Describe Centrifugation and compare it to filtration.
Separating the constituents of homogenous mixtures	<ul style="list-style-type: none">- Describe the techniques Simple distillation, Crystallization And Chromatography.-Identify the materials needed to perform these techniques.
Solutions	<ul style="list-style-type: none">-Recognize how a solution differs from other types of mixtures.-Name the different parts of solution.-Distinguish how properties of solutions differ from properties of their original components.
The amount of solute that dissolves can vary	<ul style="list-style-type: none">-Explain how the concentration of a solution varies.-Describe how a solute's solubility can be changed.

Chemical reactions	<ul style="list-style-type: none"> -Explain that chemical changes form new substances -Compare between chemical reactions and physical reactions -Recognize evidence of chemical changes and describe how these changes occur -Identify three types of chemical reactions -Indicate the reactants and the products of a chemical reaction -explain why the total mass of the products is equal to the total mass of the reactants.(Law of conservation of mass)
Combustion	<ul style="list-style-type: none"> -Identify the three requirements for combustion to occur. - Describe complete combustion -Describe incomplete combustion -Identify rapid and slow combustion reactions.
The Atom	<ul style="list-style-type: none"> -Describe the structure of an atom -Recognize the sub particles of the atom
Introduction to periodic table	<ul style="list-style-type: none"> -Identify physical and chemical properties of some elements in the periodic table -Classify the elements as metals, nonmetals and metalloids. -Indicate the atomic number and the atomic mass number of an atom.\ -Calculate the number of neutrons of an atom.
Ions	<ul style="list-style-type: none"> -Explain how ions are formed from atoms. -Identify some ions.