

Sai Kung Sung Tsun Catholic School (Secondary Section)
F.4 Chemistry TEACHING SYLLABUS

Topic	Experiment/ Activity
1. Planet Earth 1.1 Atmosphere 1.2 Ocean 1.3 Rocks and minerals	1. Obtaining pure water from sea water 2. What does common salt contain? (Part I and II) 3. Investigating the action of heat, water and dilute acid on calcium carbonate
2. Microscopic World I 2.1 Atomic structure 2.2 The periodic table 2.3 Ionic and metallic bonds 2.4 Covalent bonds 2.5 Relating the properties of substances to structures and bonding	1. Observing migration of ions 2. Building models of sodium chloride, diamond, graphite and quartz 3. Relationship between properties and structure of substances
3. Metals 3.1 Occurrence and extraction of metals 3.2 Reactivity of metals 3.3 Reacting masses 3.4 Corrosion of metals and their protection	1. Extracting metals with carbon 2. Comparing the reactivity of metals by their displacement reactions 3. Investigating the necessary conditions for rusting 4. Investigating the effectiveness of various ways to prevent rusting
Revision	
First Term Examination	
4. Acids and Bases 4.1 Acids and alkalis 4.2 Molarity, pH scale and strengths of acids and alkalis 4.3 Salts and neutralization 4.4 Concentration of solutions and volumetric analysis	1. Investigating the properties of dilute acids 2. Investigating the properties of dilute alkalis 3. Investigating the corrosive nature of concentrated acids and alkalis 4. Measuring the temperature change of neutralization reactions 5. Preparing sodium sulphate from an acid-alkali titration 6. Preparing solutions of known concentrations
Uniform Test	
5. Chemical cells 5.1 Chemical cells in daily life 5.2 Simple chemical cells 5.3 Oxidation and reduction 5.4 Oxidation and reduction in chemical cells 5.5 Electrolysis	1. Building simple chemical cells 2. Investigating redox reactions 3. Investigating the electrolysis of acidified water 4. Electroplating with nickel
6. Microscopic world II 6.1 Shapes of molecules 6.2 Bond polarity and intermolecular forces	1. Building models of molecules 2. Testing liquids to find out if their molecules are polar
Revision	
Second Term Examination	

F.4 CHEMISTRY ASSESSMENT SYSTEM :

Term Result (100%) = Term exam (50%) + Course work(50%)

Course work (100%) = Uniform Test/Term Tests/Quizzes(50%) + homework(40%) + learning attitude (10%)

Annual Result (100%) = 1st Term Result (50%) + 2nd Term Result (50%)