Chemistry
Form 4
(2021-2022)

Introduction

The current NSS chemistry curriculum in the school is tailored with reference to the Syllabus suggested by Curriculum Development Council, Hong Kong. The public assessment of this subject is based on the Curriculum and Assessment Guide (Secondary 4-6) Chemistry jointly prepared by the Curriculum Development Council and the Hong Kong Examinations and Assessment Authority.

This Chemistry course is set to:

(a) provide students with a platform for further study in NSS chemistry;
(b) equip students with an appropriate level of chemical literacy so as to function effectively as an informed citizen in a technological society;
(c) prepare students for the formulation of values related to moral, economic, and environmental aspects of chemistry, so that they may grow up to be a responsible citizen; and
(d) provide students with some insight into future career prospects in the fields related to chemistry.

Assessment Objectives

The assessment objectives of Chemistry are to evaluate the abilities of candidates to:

1. recall and show understanding of chemical facts, patterns, principles, terminology and conventions;
2. show an understanding of the use of apparatus and materials in performing experiments;
3. handle materials, manipulate apparatus, carry out experiments safely and make accurate observations;
4. demonstrate an understanding of the method used in chemical investigation;
5. analyse and interpret data from various sources, and draw relevant conclusions;
6. manipulate and translate chemical data and to perform calculations;
7. apply chemical knowledge to explain observations and to solve problems which may involve unfamiliar situations;
8. select and organise scientific information from appropriate sources and to communicate this information in an appropriate and logical manner;
9. understand and evaluate the social, economic, environmental and technological implications of the applications of chemistry; and
10. make decisions based on the examination of evidence and arguments.

11. learn a wise use of resources, environmental protection, sustainable development, ecological safety and resources safety as stated in National Safety Education.

Pre-requisite

Students are expected to have a good knowledge of the chemistry components of the junior secondary science course as well as topics in the syllabus.

Content of the course

The Form 4 teaching program will cover first five to seven sections of the suggested syllabus. Slight adjustment may be implemented according to the actual progress of teaching and learning. The contents of the course are as follows

First Term
1. Planet Earth
2. Microscopic World I
3. Metals
4. Acids and Bases

Second Term
4. Acids and Bases
5. Redox reactions, chemical cells and electrolysis
6. Microscopic World II
7. Fossil Fuels and Carbon Compounds

Mode of lessons:

There are four lessons every week. There will be lectures, laboratory work and tutorials throughout the year.

Assignments

1. Classwork Exercises - Every student is required to finish all the classwork exercises assigned within a given period of time. There will be about fifteen to twenty questions on each topic.
2. Homework Exercises and Supplementary Exercise - There will be assignments after accomplishing a topic. Students are expected to submit their work two days after. Their assignments should be done in detail.
3. Experiment Report - There will be about one to two experiments under the teachers' instructions every term. Simple reports on the experiment are required after each experiment.
4. Group Projects - Students are required to choose one to two topics on current issues related to chemistry and to work on a project in groups of two.

5. Reading report - Every student needs to complete one reading report according to school requirements.

Assessment:

1. Quizzes and Tests - frequent inspection of the learning progress of each student will be carried out.
2. 1st Term Examination and Final Examination –

   1st Term examination consists of one paper (1 hour and 30 minutes)

   This paper consists of two sections:

   Section A consists of multiple choice questions

   Section B consists of short questions, structured questions and essay questions.

   Final examination consists of one paper (2 hours)

   This paper consists of two sections:

   Section A consists of multiple choice questions

   Section B consists of short questions, structured questions and essay questions.

Continuous Assessment:

1.	Continuous assessments and uniform Test	10%
2.	Project / Scientific Investigation / Practical assessment	5%
3.	Attitude	5%