

Science 8

Time: 7 x 35 minutes per week

Course Description:

The grade 8 science course lays the foundation for the IGCSE program by providing a comprehensive introduction to physics, chemistry and biology whilst encouraging the spirit of scientific inquiry in all aspects of the students' learning. Emphasis is placed on all three sciences as students explore various aspects of the natural world and the relationships between them. It recognizes that a student's understanding of science continually develops and evolves which leads them to a deeper appreciation and awareness of the world as viewed from a scientific perspective. It encourages curiosity and ingenuity and enables the student to appreciate the scientific method of establishing scientific knowledge. Laboratory experiments will provide students with the opportunity to engage in science beyond the classroom while developing their analytical and report writing skills.

The program will be organized into four modules: Biology, Chemistry, Physics and Experimental Science. Each module is a 8-week program where students will be taught by specialised teachers who will establish the foundational knowledge required by the IGCSE and IB science programs and the experimental skills and thought process necessary for research work.

Competency in the various modules will be assessed by assignments, topical and module tests, laboratory work and semester exams.

Resources:

Pam Large (2013), Complete Biology for Cambridge Secondary 1 Textbook, Oxford University Press
 Pam Large (2013), Complete Biology for Cambridge Secondary 1 Workbook, Oxford University Press
 Philippa Gardom Hulme (2013), Complete Chemistry for Cambridge Secondary 1 Textbook, Oxford University Press
 Philippa Gardom Hulme (2013), Complete Chemistry for Cambridge Secondary 1 Workbook, Oxford University Press
 Helen Reynolds (2013), Complete Physics for Cambridge Secondary 1 Textbook, Oxford University Press
 Helen Reynolds (2013), Complete Physics for Cambridge Secondary 1 Workbook, Oxford University Press

Main Topics Covered:

Biology module

- Diet
- Digestion
- Circulation
- Respiration and Breathing
- Reproduction and fetal development
- Adaptation and survival

Physics module

- Energy sources
- Heat energy
- Electricity

Chemistry module

- Atomic Structure
- Energy Changes
- Making Salts (Acid reactions)
- Material Changes (Chemical reactions)
- Reactivity Series

Experimental Science (continuation from grade 7)

- Scientific Method
- Components of a Laboratory Report
- Process of a Scientific investigation

Assessment

Internal Assessment	Weighting
<ul style="list-style-type: none"> • End of Semester 2 Examinations (SA2) - end of the academic year • Module tests - end of the Biology, Chemistry & Physics modules • Continual Assessment (CA1 + CA2 + CA3 + CA4) including: <ul style="list-style-type: none"> - Topic tests, Assignments - Homework and class work - Lab reports 	45% 25% 4 x 7.5%
	100%