



ST. FRANCIS
METHODIST SCHOOL
Possibilities to Realities

Curriculum Description for Singapore-Cambridge GCE 'O' Level

SCIENCE (Pure) - BIOLOGY 5093

Introduction:

This syllabus is designed to place less emphasis on factual material and greater emphasis on the understanding and application of scientific concepts and principles.

Aims:

These are not listed in order of priority.

The aims are to:

1. provide, through well designed studies of experimental and practical Biology, a worthwhile educational experience for all students, whether or not they go on to study science beyond this level and, in particular, to enable them to acquire sufficient understanding and knowledge to
 - 1.1 become confident citizens in a technological world, able to take or develop an informed interest in matters of scientific import;
 - 1.2 recognise the usefulness, and limitations, of scientific method and to appreciate its applicability in other disciplines and in everyday life;
 - 1.3 be suitably prepared and stimulated for studies beyond Ordinary Level in Biology, in applied sciences or in science-dependent vocational courses.
2. develop abilities and skills that are relevant to the study and practice of science; useful in everyday life; encourage efficient and safe practice and, encourage effective communication.
3. develop attitudes relevant to science such as accuracy and precision; objectivity; integrity; enquiry; initiative; inventiveness.
4. stimulate interest in and care for the environment.
5. promote an awareness that
 - 5.1 the study and practice of science are co-operative and cumulative activities, and are subject to social, economic, technological, ethical and cultural influences and limitations;
 - 5.2 the applications of sciences may be both beneficial and detrimental to the individual, the community and the environment;
 - 5.3 science transcends national boundaries and that the language of science, correctly and rigorously applied, is universal;
 - 5.4 the use of information technology is important for communications, as an aid to experiments and as a tool for interpretation of experimental and theoretical result.

Scheme of Assessment:

Candidates are required to enter for Papers 1, 2 and 3.

Paper	Type of Paper	Duration	Marks	Weighting
1	Multiple Choice	1 h	40	25%
2	Structured and Free Response	1 h 45 min	80	50%
3	Practical test	1 h 30 min	40	25%

Subject Content (Topics):

1. Cell Structure & Organisation
2. Diffusion & Osmosis
3. Enzymes
4. Plant Nutrition
5. Animal Nutrition
6. Transport in Flowering Plants
7. Transport in Humans
8. Respiration
9. Excretion
10. Homeostasis
11. Coordination & Response
12. Use & Abuse of drugs
13. Microorganisms & Biotechnology
14. Relationship of Organism with one another & with the Environment
15. Development of Organisms & Continuity of life
16. Inheritance

Please refer to the SEAB website for more information regarding this course.
<http://www.seab.gov.sg>