

Christian Alliance Cheng Wing Gee College

Program Plan 2008/2009

Biology

I. Aims

1. To strengthen the English speaking skills of students.
2. To foster students skills and attitudes in life long learning of Biology.
3. To enhance students' exposure to the global environmental issues and the new development in Biology.
4. To prepare for the NSS curriculum.

II. Situational Analysis

A.Strengths

1. The school provides sufficient apparatus, materials and reference materials both in the library and laboratory.
2. The teachers in the subject are experienced, co-operative, innovative and responsible with effective working ability and constructive in developing ideas to suit students' needs.
3. All AL students & more than 70% CE students show interest in studying Biology especially on topics concerning human health & biotechnology and can make improvement after understanding certain abstract principles.
4. The school is well equipped with IT facilities so that different microscopic slides and photomicrographs from CD ROMs obtained can be used to illustrate detailed structures and different websites can be visited to enhance students' interactive learning.
5. The school is supportive in providing additional funds for the running of enhancement classes to students.
6. The laboratory technicians are supportive and cooperative in the teaching of the subject.

B. Weaknesses

1. Students show great variation in learning attitudes and language especially in the presentation skills.
2. Most of the students find difficulties in memorizing facts and spelling of words so that some of them easily give up.
3. Some students are weak in transferring skills learnt across contexts and lack of confidence in the process of scientific investigation.
4. Some students are weak in analytic power and cannot draw conclusion from data provided easily.
5. Teaching time is not enough so that supplementary lessons must be conducted to complete the syllabus and supplementary lessons of different subjects make it difficult for students to find time to study and review problems.

III. Committee/Subject Focus 2008-09

Committee/Subject Focus	Address to School 08-09 Major Concern
1. To encourage students to speak English with confidence in lessons.	A3 & A4
2. To develop students' interests and skills in learning.	B1, B2 & B4
3. To encourage the participation of students in external activities and competitions	B3
4. To promote students' awareness of global environmental issues and new biological development.	
5. To develop school base NSS curriculum and develop teachers' professionalism in the implementation of the curriculum.	C

IV. Operational strategies:

Task/Strategy	Description	Expected Outcomes	Success Criteria/Evaluation Method	Time Scale	Resources Required/Budget	Person-in-charge
Focus 1: To encourage students to speak English with confidence in lessons. (EMI policy)						
Enhancing the use of spoken English	Teach pronunciation of Biological terms	Students can speak out technical terms correctly	70% students can answer questions raised in lessons with English readily.	Whole year	Textbooks, reference books and Dictionaries	TKL, PYC, LCK, HSS
	Arrange group discussion, debate & oral presentation	Students learn to lead group discussion and present it in a proper & logical way.	70% students communicate effectively in English			
Focus 2: To develop students' interests and skills in learning.						
Pedagogical innovations	Apply concept map at different stages	Students develop ability in transferring skill / knowledge learnt	All students connect knowledge learnt in different topics more readily	Whole year	Reference materials	TKL, PYC, LCK, HSS
	Arrange more problem solving activities related to daily life	Students are open minded for discussions and infuse process & thinking skills	70% students apply Biology knowledge to solve daily life problems		Activity books. Internets	
Enriching students' exposure	Introduce interesting Biological related programmes from TV, Discovery Channel and Internet to students	Students can appreciate different aspects of Biology	All students can write commentary to the programme watched or answer related questions in short quizzes.	Whole year	TV, internet and Discovery Channels subscribed by the school	TKL, PYC, LCK, HSS

Motivation to learn	Prizes given to students with improvement made in UT, 1 st and 2 nd Examination.	Students take initiative in learning and doing project work	70% students shown improvement in marks obtained in tests and examination.	Whole year	Textbook, reference, subject grant	TKL, PYC, LCK, HSS
	Bonus marks given to students undertaking extra – project work					

Focus 3: To encourage the participation of students in external activities and competitions

Extra-curricular activities	Arrange visits to museum, conservatory sites and universities.	Students gain first hand experience in observation and participation in conservation activities	70% students show eagerness to visit different sites, attend public lectures and participate in competition on their own readily.	Whole year	Subject grand, additional grant	TKL, PYC, LCK, HSS
	Arrange students to attend public lectures organized by different external bodies	Students have broaden their horizon in Biology.				
	Encourage students participation in external competition					

Focus 4: To promote students' awareness of global environmental issues and new biological development.

Reading to learn	Assign newspaper / articles / hot issues (e.g. Jenner-vaccine to prevent smallpox, Human Genome Project) for reading time	Distribute interesting news / articles/ hot issues collected from various sources	70% students show interest in reading and ready to collect cuttings on topics of interest	Whole year	Biology news / articles extracted from various sources	TKL, PYC, HSS, LCK
	Assign library / internet searching activity for different topics	Students develop ability in retrieving relevant scientific information, organizing it for discussion & use IT to process & present it in a clear & logical manner	70% students participate actively & constructively in groups and class discussion; make judgments from arguments and widen the perspective of the matter being considered	October to May	Library / internet services	TKL, PYC, HSS, LCK

Focus 5: To develop school base NSS curriculum and develop teachers' professionalism in the implementation of the curriculum.

Planning and development of NSS curriculum	Discussion amount panel members and writing teaching materials	School based curriculum developed.	Smooth implementation of the curriculum	Whole year	Textbook, reference and internet	TKL LCK
Development of teachers' professionalism in the implementation of the curriculum	Attend courses organized by the Education Bureau and Universities	Teachers have better understanding of the curriculum and are able to teach according to the criteria set up in the NSS.	Records of training are registered.	Whole year	Information from the EB and other organizations	TKL, PYC, LCK, HSS

Others						
IT in interactive learning & teaching	Encourage participation in different learning forum such as Human Genome Project & Gene Therapy	Students learn collaboratively in an informal setting at their own pace and learn with students in another part of the world	70% students complete the tasks successfully	Whole year	IT support	TKL, PYC
	Facilitate the use of simulation experiments such as data loggers	Students grasp abstract biological concepts in an effective way, create data tables, plot results & find out mathematical relationships	All students perform better in concept check exercises	October to May	Related software	TKL, PYC, HSS, LCK
	Search & collect relevant materials in interactive CD-ROMs & websites	Students are introduced to different topics	All students are given opportunities for in-depth exploration on interested topics	Whole year	Subject grant, IT support	TKL, PYC, HSS, LCK
	Update Biology homepage on intranet	Students are introduced to Biology activities and Biology-related programmes	70% students are given more time to pursue activities & experience enjoyment through Biology-related programmes	Whole year	IT support	TKL,
Project learning	Arrange small scale projects for F3 students	Students develop process skills through first-hand investigation	All students show development of communication, creativity, critical thinking and problem-solving skills	February to May	IT support and Reference materials	TKL, HSS, LCK
	Arrange projects on different topics for F4 & F6 students	Students design and make artifact for particular purposes	All students show development of communication, creativity, critical thinking and problem-solving skills	February to May	IT support, Reference materials	TKL, PYC
	Select & encourage students to participate in different extra-curricular activities for F3, 4 & 6 students;	Students participate in different extra-curricular activities outside school campus	70% students show development of communication, creativity & problem-solving skills	Whole year	IT support, Reference materials	TKL, PYC, HSS, LCK
Integrating moral and civic education	Arrange field trips to different habitats for F4 & 6 students	Students learn to respect all living organisms	70% students show appreciation to God's creation of the wonderful living world and respect all living organisms	December and April	Reference materials	TKL, PYC, LCK
	Carry out group discussions / debates on controversial issues of personal & public concern, e.g. cloning human beings	Students are open to different ideas and view the same issue with different perspectives	70% students show tolerance & respect towards different viewpoints, opinions & values	October to May	Biological articles from internets, magazines, newspaper, government documents, etc.	TKL, PYC, HSS, LCK
	Integrate decision making exercises on issues related to community, local & global environments	Students find evidence to support or disagree with different issues	70% students make responsible judgments based on scientific			TKL, PYC, HSS, LCK

			evidence			
Catering for learning difference	Drill experimental techniques and examination techniques	Students study independently	70% students have higher achievements and become motivated in self-learning	Whole year	Reference materials from difference resources, teachers' time	TKL, PYC, LCK
	Provide guidance for independent projects	Students undertake projects for the pursue of intense personal interest	70% students become motivated in self learning			TKL, PYC, LCK, HSS
	Encourage higher achievers to participate in external competition	Students are nominated to take part in external competition	70% students become more active to initiate his / her own to participate in competition		Information from external bodies, reference materials from different resources	TKL, PYC, LCK
	Encourage average and low achievers to participate in the consolidation class provided from the school	Students are nominated to take part in the consolidation class	70% students have higher academic achievements & become motivated in self-learning		Resources from school	TKL, PYC, LCK
	Provide more clues and small guided steps for projects and questions for low achievers	Students have extra help to identify & clarify common misconceptions in Biology concepts	70% students make better progress and become more motivated in learning Biology		Reference materials from difference resources, teachers' time	TKL, PYC, LCK, HSS
	Worksheets prepared should include questions of different difficulties	High achievers can have more challenge to upgrade their knowledge while the low achiever will not be discouraged by difficult questions.	70% students enjoy their homework			TKL, PYC, LCK, HSS
Staff development	Distribute seminar /workshop information of NSS from EMB & other organizations	Teachers are familiar with the NSS curriculum in the syllabus, assessment requirements, etc.	Each teacher attends at least 3 relevant seminars /workshops / talks and keep a good training record	Whole year	Information from EB & other organizations	TKL
	Arrange discussions about the syllabus, assessment requirements & carry out experiments required by TAS & experience sharing among teachers		Teacher evaluation by discussion & questionnaire			Information from EB & resources from school
Assessment policy	Formative assessment	Students can get regular feedback from teachers during teaching.	All misconception can be cleared before proceeding to the next topic.	Whole year	Reference and teaching times	TKL, PYC, HSS, LCK
	Summative assessment	Students can know their grade and standard before proceeding to the next session.	All students can know their strength and weakness and be able to do some remedy before			

			next session.			
Administration	Develop and upgrade teachers' teaching competency, keep record of the training	Teachers are willing to attend relevant seminars, workshops and talks	Each teacher attends at least 3 seminars / workshops / talks for the academic year	Whole year	Subject grant, additional grant, training information from EMB	TKL, PYC, HSS,
	Enhance collaborative teaching	Join preparation of different topics for F3 students	All teachers share teaching materials		Reference materials, teachers' time	LCK

V. TEAM MEMBERS

1. Kung To Ka Lai (TKL) (Head)
2. Pang Yiu Choi (PYC)
3. Leung Chun Kit (LCK)
4. Ho So Sheung (HSS)