

**TIN KA PING SECONDARY SCHOOL
BIOLOGY
FORM SIX SYLLABUS**

Chapter	Content	Language objectives	Experiments	Aids / resources	Activities – STSE or SBA	Generic skills *												
						1	2	3	4	5	6	7	8	9				
		Students should be able to:																
Ch.29 – Applied genetics	Recombinant DNA technology DNA fingerprinting Human Genome Project	to describe the key steps of genetic engineering present the arguments clearly using language forms of sequence like: To begin with... First, ... Next, ... Then, ... After that, ... Finally, ...		Animations – PCR, gel electrophoresis, history of the development of genetics Newspaper cuttings Booklets – GM food Factsheets – GM food, biotechnology, bioethics, cloning, human genome project	Applications of recombinant DNA technology GM food – pros and cons Human Genome Project – its potential benefits and drawbacks Bioethics of biotechnology			✓	✓	✓	✓					✓	✓	
Ch.30, 31 – Evolution I & II	The origins of life Evolution						✓		✓	✓		✓					✓	
	Mechanism of evolution Speciation	explain the cause and effects of evolution by the theory of natural selection using causal connectives, verbs of causes, adverbs of certainty and reference.		Movie clips -山水傳奇(2009)-巒, Galapagos Islands Factsheets – the story of coelacanth, Darwin			✓		✓	✓		✓					✓	
E1 Ch.1 – Regulation of water content	Importance of regulating water content The human urinary system		1.1 Examination of the mammalian urinary system Practical Workbook p.105 1.2 Examination of the mammalian kidney Practical Workbook p.108	Factsheet – Kidney failure Model – kidney structure	Kidney failure and treatments in Hong Kong		✓		✓	✓		✓					✓	

Chapter	Content	Language objectives	Experiments	Aids / resources	Activities – STSE or SBA	Generic skills *													
						1	2	3	4	5	6	7	8	9					
		Students should be able to:																	
	Functioning of a nephron The role of the kidneys The dialysis machine			Animations – counter current multiplier in nephrons			✓		✓	✓		✓							✓
E1 Ch.2 – Regulation of body temperature	Importance of regulating body temperature The role of skin Other mechanisms of body temperature regulation The thermoregulatory centre		2.1 Examination of the mammalian skin <i>Practical Workbook</i> p.111	Model – skin structure	How to avoid heat stroke in summer?		✓		✓	✓		✓							✓
E1 Ch.3 – Regulation of gas content in blood	Importance of regulating gas content in blood Control of breathing Control of heartbeat Effects of exercise on breathing and cardiac output		3.1 Study of the changes in breathing before and after exercise using a breath volume kit <i>Practical Workbook</i> p.113 3.2 Study of the changes in breathing before and after exercise using a data logger <i>Practical Workbook</i> p.116 3.3 Study of the changes in heart beat before and after exercise using a data logger <i>Practical Workbook</i> p.120	Animations – control of heart beat			✓		✓	✓		✓							✓

Chapter	Content	Language objectives	Experiments	Aids / resources	Activities – STSE or SBA	Generic skills *												
						1	2	3	4	5	6	7	8	9				
		Students should be able to:																
E1 Ch.4 – Hormonal control of reproductive cycle	Hormonal control of the menstrual cycle Use of hormones				Applications of synthetic hormones in human reproduction – contraception and conception		✓		✓	✓		✓						✓
E4 Ch 1 Traditional and modern biotechnology Ch 2 Biotechnology in medicine and agriculture Ch 3 Bioethics							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Revision</i>																		
<i>Christmas & New Year</i>																		
<i>Final Exam</i>																		

*

1.	collaboration	2.	communication	3.	creativity
4.	critical thinking	5.	information technology	6.	numeracy
7.	problem solving	8.	self-management	9.	study