



Enseignement secondaire		
Classes internationales		
	Régime anglophone	
Biologie		
Programme		
7IEC		

Leçons hebdomadaires: 2
Langue véhiculaire: anglais
Nombre minimal de devoirs par trimestre : 1

Theory

	<u>Topic</u>	<u>Contents</u>
1	Life processes	<ul style="list-style-type: none">• Recall and describe the <u>characteristics of life/life processes</u>• Explain the differences between living organisms and non-living things
2	Classification	<ul style="list-style-type: none">• Distinguish between 3 or 5 kingdoms and name their characteristics• Define <u>species</u>• Identify <u>vertebrates and invertebrates</u> and name their characteristic features• Identify the 5 classes of vertebrates and name their characteristics (skin, body temperature, reproduction*, respiration)• Describe and explain these characteristics using examples of animals• Hibernation• Use a dichotomous key• Name examples of <u>native and endangered species</u>• Describe and evaluate different <u>forms of livestock farming</u> <p><i>* Describe how egg cells are fertilised in animal sexual reproduction;</i> <i>Compare fertilization and offspring care in fish, birds and mammals</i></p>



3	Cells, tissues, organs and systems	<ul style="list-style-type: none">• Identify the main parts of <u>animal and plant cells</u> and describe their functions• Identify and recall named tissues in human and plant organs• Describe the functions of different <u>tissues</u> in an organ• Identify and locate important plant and animal <u>organs</u>• Describe the functions of important plant and animal organs• Describe what happens in <u>photosynthesis</u>• Identify and recall the main organs in the plant water transport system• Identify and recall the main organs in the human locomotor, digestive, circulatory, breathing, urinary and nervous <u>system</u>
		<i>Application: Organ transplants</i>
4	Human reproduction	<ul style="list-style-type: none">• Name the parts of the <u>male and female reproductive systems and their functions</u>• Explain how <u>sperm</u> and <u>egg cells</u> are adapted to their functions• Describe and explain what happens during adolescence• Describe and explain what happens in the <u>menstrual cycle</u>• Describe how sexual intercourse can lead to the implantation and <u>development of an embryo</u>• Describe how an embryo is protected and cared for in the uterus• Describe and evaluate different <u>methods of contraception</u>• Explain the dangers of selected <u>sexually transmitted diseases</u> (HPV and HIV)
		<i>Applications:</i> <ul style="list-style-type: none">- <i>In vitro fertilization</i>- <i>HPV vaccination</i>
5	Ecosystems	<ul style="list-style-type: none">• General definitions: <u>biosphere, ecosystem, biotope, biocenosis, biotic and abiotic factors...</u>• Define what a <u>species</u>, a <u>population</u> and a <u>habitat</u> is• Use a <u>food web</u> to make predictions• Use <u>pyramids of numbers</u> to describe how energy is lost in a <u>food chain</u>



General skills:

- Use of command terms
- Charts and graphs
 - Present information as bar charts or scatter graphs
 - Identify relationships using scatter graphs
 - Analyse and describe trends of a graph

Practical Work - examples

<u>Topic</u>	<u>Contents</u>
Scientific method	<ul style="list-style-type: none">• State the purpose of and the common steps in the scientific method• Describe the role of scientific questions in the scientific method• Identify scientific, non-scientific and ethical questions• Describe and use the convention for investigation reports (Aim and research question, hypothesis, method, apparatus, results, conclusion, evaluation)
Microscopy	<ul style="list-style-type: none">• prepare a microscope slide• use a light microscope to examine animal and plant cells
Dichotomous key	<ul style="list-style-type: none">• Establish a dichotomous key using models of vertebrates
Classification	<ul style="list-style-type: none">• Use skulls of vertebrates and dentition for classification• Determine the relationship between dentition and mode of nutrition
Endangered species	<ul style="list-style-type: none">• Presentations• "Hello Spring"
Photosynthesis	<ul style="list-style-type: none">• Identify the products of photosynthesis• Determine the effect of light intensity on the rate of photosynthesis (in elodea)
Contraceptive methods and sexually transmitted diseases	<ul style="list-style-type: none">• Use the general rules for producing and performing a presentation
Ecosystem	<ul style="list-style-type: none">• Analyse different factors of a selected ecosystem (pond, forest,...)
Populations	<ul style="list-style-type: none">• Determine population densities
Species	<ul style="list-style-type: none">• Determine species using a field guide