



<b>Enseignement secondaire</b>		
<b>Classes internationales</b>		
	<b>Régime anglophone</b>	
<b>Biologie</b>		
<b>Programme</b>		
<b>7IEC</b>		

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

### Theory

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



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



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