



Enseignement secondaire		
Classes internationales		
	Régime anglophone	
Physique		
Programme		
7IEC		

Leçons hebdomadaires: 1,5
Langue véhiculaire: anglais
Nombre minimal de devoirs par trimestre: 2

Theory

	Topic	Subtopics	Contents
1	Current electricity	Switches and current Series and parallel circuits Voltage Using electricity	<ul style="list-style-type: none">- Explain how switches work- Describe what happens when the number of bulbs in the circuit is changed- Describe what a current is and how it is measured- Distinguish between series and parallel circuits- Describe how changing the number or type of components in a circuit affects the current- Describe how a voltmeter is used- Explain the influence of the voltage on the current- Safety precautions to be followed when using electricity- Explain how fuses and circuit breakers work
2	Sound	Sound production Sound transmission Sound detection Ultrasound	<ul style="list-style-type: none">- How sound is produced- Explain the link between frequency and pitch- Explain the need of a material medium for sound to travel- How to detect sound: ear, microphone- Hearing ranges of human and animals- Using sound: ultrasound, sonar and echolocation- Effects of noise on humans and animals



3	Energy and changes	<p>Energy from food</p> <p>Energy transfers and storage</p> <p>Fuels</p> <p>Renewable energies</p> <p>Using resources</p>	<ul style="list-style-type: none"> - Discuss that our bodies need energy which we get from food - Explain why different people need different amounts energy from food - Introduce the unit for measuring energy (joule, kilojoule) - Describe the different ways in which energy is stored and transferred - Discuss and compare fossil fuels and renewable fuels - Give examples of renewable energy sources - Explain how the Sun is the original source for most of our energy resources - Describe how to use less fossil fuels - Advantages and disadvantages of fossil fuels - Explain what efficiency means
4	Forces and pressure	<p>Different forces</p> <p>Pressure</p>	<ul style="list-style-type: none"> - Discuss the effects of forces on an object - Name forces and distinguish between contact and non-contact forces - Explain the difference between mass and weight - Describe how to measure forces, masses and state their units - Explain pressure - Calculate pressure - Describe effects of high and low pressure
5	Units (to be taught within the individual chapters)	SI units	<ul style="list-style-type: none"> - Explain why scientists use SI units - Record numbers using suitable units - Use prefixes and symbols in the SI system



General skills:

1. Use of command terms
2. Summarize key points in a text
3. Use of tables
4. Writing a method
5. Charts and graphs (see chemistry and physics)
 - o Present information as bar charts or scatter graphs
 - o Identify relationships using scatter graphs (proportionality)
 - o Analyze and describe trends of a graph
6. Modelling in science: how to use them in science and testing them
7. Use suitable units

Practical work Suggestions

The practical activities are an important an integral part of the course.

	<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)- Explain what a fair test is and make fair comparisons of results
1	Current Electricity	<ul style="list-style-type: none">- Series and parallel circuits with switches- Series and parallel circuits with lamps- Conductors and insulators (solids and liquids)
2	Sound	<ul style="list-style-type: none">- Sound sources
3	Energy and energy changes	<ul style="list-style-type: none">- Energy in different foods
4	Forces and pressure	<ul style="list-style-type: none">- Measure masses, weight and forces- Investigate pressure on solids