Enseignement secondaire		
Classes internationales		
	Régime anglophone	
Physique		
Programme		
6IEC		

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

Theory

	Topic		**Contents**
1	**Fluids**	Particle model	- Describe the properties of different states of matter - Explain the properties in terms of the particle model - Explain why materials expand and contract when the temperature changes
		Density	- Use the formula relating volume, mass and density of an object
		Changing state	- State the temperature of a substance does not change when it changes state Describe what happens to particles during changes of state
		Pressure in fluids	- Describe how fluid pressure changes with depth or height - Describe how gas pressure can de increased - Use particle model to explain some effects of pressure
		Floating and sinking	- Describe what is meant by up thrust - Explain why some objects float - Use ideas about density in explanations
2	**Light**	Light on the move	- Explain why we can see objects - Compare light and sound waves - Describe what happens to light when it hits different objects

		Reflection Colour	- Describe how to demonstrate that light travels in straight lines - Describe how mirrors and rough surfaces reflect light - Describe how an image is formed in a mirror - Describe how to make a light spectrum - Explain why coloured objects appear coloured
3	**Energy transfers**	Temperature changes: internal energy and temperature Transferring energy	- Explain how internal energy and temperature are different - Identify the direction in which energy will be transferred - Explain evaporation - Explain how energy is transferred by conduction, convection, radiation - Use the particle model to explain energy transfers in matter - Controlling transfers - Discuss how to reduce energy tranfers

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)
    - Present information as bar charts or scatter graphs
    - Identify relationships using scatter graphs (proportional relationship)
    - Analyze and describe trends of a graph
6. Modelling in science: how to use them in science and testing them
7. Calculating with simple formulae y = a times x
8. Measuring angles
9. Understand accuracy and precision
10. Understand difference between random and systematic errors and their effects on measurements
11. Rounding numbers

Practical work Suggestions

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

	Topic	**Contents**
	Scientific method	- 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, dependent and independent variables, control variables, apparatus, results, conclusion, evaluation) - Explain what a fair test is and make fair comparisons of results
1	**Fluids**	- How do we find the density of a material / object? - Explore factors that affect the amount of up thrust - Temperature measurement - Temperature curve during change of state
2	**Light**	- Propagation of light - Reflection - Shadows
3	**Energy transfers**	- Insulation - Thermal conductivity - Ice cube challenge