

*Physics IGCSE*  
Curriculum



# *Cambridge IGCSE 0972*

## **Introduction**

This document outlines the curriculum for students studying IGCSE Physics at LWSF during Years 10 and 11. The course follows the Cambridge IGCSE Physics syllabus and is designed to develop students' understanding of physical concepts and their applications. It will equip them with the necessary knowledge and tools to succeed in future studies and real-world applications.

Mahy Kavei, Physics Teacher

### *Aims*

The primary goals of this course are to:

- Develop students' knowledge and understanding of physical concepts.
- Enhance students' experimental skills and ability to conduct scientific investigations.
- Foster a positive attitude towards physics and encourage enjoyment of the subject.
- Prepare students for further study in physics or related fields.
- Enable students to apply physical knowledge and skills to real-world problems..

### *What The Student Will Learn*

### *Course Overview*

IGCSE Physics is a comprehensive course that covers a wide range of physical topics. It is designed to provide a strong foundation for further study in physics or other subjects. The course emphasizes experimental work, problem-solving, and the ability to communicate scientific ideas effectively.



## *Core Topics*

All students will study the following core topics:

### **1. Motion, Forces & Energy**

- a. Physical Quantities & Measurement Techniques
- b. Motion
- c. Mass, Weight & Density
- d. Effects of Forces
- e. Moments
- f. Momentum
- g. Energy, Work & Power
- h. Energy Sources
- i. Pressure

### **2. Thermal Physics:**

- a. Temperature and heat
- b. Thermal expansion
- c. Internal energy
- d. Kinetic theory of matter

### **3. Waves:**

- a. Waves
- b. General Properties of Waves
- c. Light
- d. Electromagnetic Spectrum
- e. Sound

### **4. Electricity and Magnetism:**

- a. Electricity & Magnetism
- b. Simple Phenomena of Magnetism
- c. Electrical Quantities
- d. Electric Circuits & Electrical Safety.
- e. Electromagnetic Effects

### **5. Nuclear Physics:**

- a. The Nuclear Model of the Atom
- b. Radioactivity

### **6. Space Physics:**

- a. Earth & The Solar System
- b. Stars & The Universe



## *Additional Topics (Option A or B)*

Students will choose one of the following additional topics:

### **Option A: Practical Physics:**

- Experimental techniques
- Data analysis
- Error analysis

### **Option B: Astrophysics:**

- Stars and galaxies
- The universe
- Cosmology

## *Assessment*

Students will be assessed through written examinations at the end of Year 11. The examinations will consist of two papers. Paper 1 will assess knowledge and understanding of the core topics, while Paper 2 will focus on experimental skills and applications.

## *Additional Resources and Support*

LWSF will provide students with a variety of resources and support to help them succeed in their IGCSE Chemistry studies. These may include:

- Textbook resources
- Online learning platforms
- Regular laboratory work
- Opportunities for additional support as appropriate

## *Evaluation and Review*

The curriculum will be reviewed annually to ensure its effectiveness and alignment with the boards' defined curriculum. Feedback from students, teachers, and parents will be considered in the review process.

Updated August 2024

Next review: August 2025