

## **IMMACULATE CONCEPTION HIGH SCHOOL**

### **GRADE 9 PHYSICS SYLLABUS**

#### **TERM 1**

##### 1. Measurements and Units

- Define physical quantities
- S. I. base quantities , units and symbols
- Conversion of units
- Use of standard form and prefixes
- Rounding off measurements using significant figures and decimal places
- Definition and use of derived quantities
- Smallest division and range of given scales
- Use of vernier caliper and micrometer screw gauge in measurement
- Linear and non linear scales
- Analogue and digital scales
- Definition of area and volume
- Area and volume of regular and irregular shapes
- Definition, formula and units of density
- Area and volume of composite shapes
- Plotting graphs, scaling and drawing the line of best fit

##### 2. Static Electricity

- Recall of the sub-atomic particles of the atom
- Definition of Static Electricity
- Investigation of the production of Static Electricity
- Useful applications of static electricity
- Hazards associated with static electricity
- Practical activities involving the production of static electricity

#### **TERM 2**

##### 3. Current Electricity

- Simple definition of the electric current
- Classification of substances as insulators and conductors of electricity
- Components of the circuit and their symbols

- Construction of simple series and parallel circuits
- Differences between series and parallel circuits
- Circuit diagrams of series and parallel circuits
- Safety devices used in circuits
- Series and parallel circuits in the home
- Electrical safety rules, electrical hazards

#### 5. Electricity and Magnetism

- Poles of the magnet
- Magnetic field and magnetic forces
- Relationship between voltage and current, resistance in a circuit
- Use of the voltmeter, ammeter and resistors in a circuit
- Construction of an electromagnet

### **TERM 3**

#### 6. Thermal Physics

- Definition of temperature, heat and energy transfer
- Good conductors and poor conductors of heat
- Investigation of physical properties which vary with temperature
- Transfer of heat by conduction, convection and radiation
- Absorption and emission of thermal energy by materials
- Construction of a device that utilizes the principle of thermal heat transfer