# KIDS WORLD SCHOOL
# SESSION - 2024-25
# ANNUAL CURRICULUM PLANNER
# SUBJECT – PHYSICS
# CLASS – IX

| MONTH | NAME OF THE CHAPTER | METHODOLOGY | LEARNING OBJECTIVES | | LEARNING OUTCOMES | MODE OF ASSESSEMENT + ACTIVITY |
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| | | | KNOWLEDGE/ CONTENT BASED | APPLICATION BASED | | |
| **APRIL + JUNE + JULY 01/04/2024 - 31/07/2024** | 07. Motion | *Lecture<br>*Demonstration<br>*Heuristics<br>*Problem Solving<br>. | *Distance and Displacement<br>*Speed and velocity<br>*Scalar and Vector Quantity<br>*Acceleration , Retardation<br>*Uniform and Non- Uniform Motion.<br>*Graphical Representation of Motion<br>*Derivations For Equations of motion and Numerical.<br>*Uniform Circular Motion. | * To solve problems related to speed, velocity average velocity and acceleration of a moving object<br>*Acceleration and its relationship with velocity and time, and apply it to real-world examples, such as the acceleration of a car or the acceleration due to gravity.<br>*Apply the concept of distance-time graphs and velocity-time graphs to analyze the motion of objects, such as the motion of a train or the free fall of an object. | *Students understand the different **t**ypes of motion and its characteristics.<br>*To distinguish between distance travelled and displacement.<br>*Learn to represent uniform and non-uniform motion graphically.<br>*Modelling, mathematical and computing skills Required to solve scientific problems. | Assessment of Learning<br><br>*Worksheets<br>*Assignments<br>* Lab Activity<br>* Case study |

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| **AUG.**<br>**01/08/2024**<br>**-**<br>**31/08/2024** | 08. Forces And Newton's Laws | *Lecture<br>*Demonstration<br>*Observation<br>*Problem Solving | *Force And Motion<br>*Balanced and Unbalance Force.<br>*Mass and inertia.<br>*Newton's First law and Its application.<br>*Momentum<br>*Newton's Second law and Its application.<br>*Newton's Third law and Its application.<br>*Law of conservation of momentum. | *Verification of Newton's first law.<br>*Verification of Newton's second law.<br>*Verification of Newton's third law.<br>*Verification of law of conservation of momentum. | *To understand various forces and their interaction on a body.<br>*To understand Newton's law and where to apply.<br>*To understand the various everyday activities that display inertia momentum. | Assessment of Learning<br>*Worksheets<br>*Assignments<br>* Lab Activity<br>* Case study |
| **SEP.**<br>**+**<br>**OCT**<br>**01/09/2024**<br>**-**<br>**10/10/2024** | 09.Gravitation | *Lecture<br>*Demonstration<br>*Laboratory<br>*Heuristics<br>. | *Universal law of Gravitation.<br>* Force of Gravitation<br>*Free Fall<br>*Acceleration due to gravity<br>*Mass and Weight<br>*Floatation- Buoyancy<br>*Thrust and Pressure.<br>*Archimedes Principal | *Apply the universal law of gravitation to calculate the force of attraction between two objects, such as the force of gravity between the Earth and the Moon or between two planets<br>*Understand the difference between mass and weight, and calculating weight on different planets. | *To understand gravity, the universal law of gravitation and its importance.<br>*To understand the concept of free fall<br>*To derive value of G and acceleration due to gravity.<br>*To learn difference between mass and weight, thrust and pressure is also clear to the students.<br>Students<br>*To understand buoyancy and Archimedes principle. | Assessment of Learning<br>*Worksheets<br>*Assignments<br>* Lab Activity<br>* Case study<br>**Activity:**<br>*To determine density of solid using spring balance<br>* To determine the loss in weight of a solid in;<br>Tap water<br>Strong salty water. |
| **OCT.**<br>**2024** | **Revision**<br>**Term I** | | | | | |

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| **NOV.**<br>**+**<br>**DEC**<br>**11/11/2024**<br>**-**<br>**14/12/2024** | 10.Work And Energy | Work And Energy<br>*Lecture<br>*Demonstration<br>*Laboratory<br>*Problem Solving | *Work in the direction of Force.<br>* Work done by oblique Force.<br>*Work against gravity<br>*Zero Work<br>*positive and Negative work.<br>*Kinetic Energy<br>*Potential Energy<br>*Law of conservation of Energy. | * work to solve problems related to lifting, pushing, or pulling objects, such as calculating the work done by a person in lifting a weight.<br>*Work done against gravity, negative work.<br>*Conditions for zero work done.<br>*Computing Kinetic energy and Potential energy. | *To understand the scientific meaning of work and Energy.<br>*To understand the work is done in the direction of force, against the direction of force, against gravity.<br>*To learn about KE and PE.<br>*To unsrstand the conversion of energy (law of conservation of energy). | Assessment of Learning<br>*Worksheets<br>*Assignments<br>* Lab Activity<br>* Case study.<br>**Activity:**<br>To determine mechanical energy of an object of given mass. |
| **DEC.**<br>**+**<br>**JAN**<br>**+**<br>**FEB**<br>**16/12/2025**<br>**-**<br>**22/02/2025** | 11.Sound | *Lecture<br>*Demonstration<br>*Laboratory<br>*Heuristics<br>*Observation | *Mechanical and Non mechanical waves.<br>*Transverse and longitudinal waves.<br>*Amplitude, Frequency, Wavelength, Time Period, speed of wave*<br>*Laws of Refection of Sound.<br>*Sound Through Various Medium.<br>*Audible range of Sound, Ultrasonic Sound, Infrasonic Sound.<br>*Echo and Reverberation<br>*Application of Ultrasound. | *Verification of laws of reflection of sound.<br>*Multiple reflection of sound. | * To understand that sound is produced by vibration.<br>*To know the various characteristics of sound wave like amplitude, frequency, wavelength, Speed.<br>*To understand that the speed of sound in different mediums.<br>*They also know about echo and reverberation.<br>*To understand the laws of reflection, echo reverberation<br>*To know the uses of reflection of sound in daily life. | Assessment of Learning<br>*Worksheets<br>*Assignments<br>* Lab Activity<br>* Case study<br>**Activity:**<br>To verify the laws of reflection. |
| **MARCH 2025** | **Revision**<br>**Term II** | | | | | |