SYLLABUS PLAN FOR THE SESSION 2020-21
SUBJECT-PHYSICS
CLASS-IX

TEXTBOOK: SCIENCE (NCERT)

Months	Chapter	Sub Topics	Learning Outcomes	Practical / Projects
April	Motion	• Describing motion, motion along a straight line, • uniform and non-uniform motion, • rate of change of motion, velocity & acceleration, • graphical representation of motion, equations of motion (graphical method).	• Differentiate between scalar and vector quantities • Explain the difference between distance and displacement, speed and velocity with examples • Derive the three equations of motion graphically.	
May	Motion	• Numerical based on equations of motion • Uniform Circular motion.	• explain uniform circular motion, and reason out that why it is known as an accelerated motion • critically analyze the different types of motion.	
July	Force and Laws of Motion	• Balanced and unbalanced forces, • first law of motion, • inertia and mass, • second law of motion, • mathematical formulation of second law of motion. • Third law of motion,	• State Newton's Laws of Motion with the help of real-life examples • Formulate the laws mathematically and solve numerical based on them	• To study the third law of motion using two spring balances.

		• Conservation of momentum.		
August	Gravitation	• Gravitation, • Universal law of gravitation, • importance of Universal law of gravitation, • free fall, • to calculate the value of 'g'.	• Explain gravitational force and derive it between any two objects • Define free fall and calculate the value of g	**Art Integrated Project** The Newtonian Toy • Design a toy using waste materials which describes any one or more laws of Motion given by Newton. Present your toy and explain the concept in form of a video.
September	Half Yearly Examination			
October	Work & Energy	• Work, • Work done by a constant force, • Energy, • forms of energy, • kinetic energy.	• explain the scientific conception of work • Calculate the amount of work done on an object • define energy and classify mechanical energy into kinetic and potential energy. • explain the concept of kinetic energy with the help of examples and derive its expression.	To determine the density of solid (denser than water) by using a spring balance and a measuring cylinder.
November	Work & Energy	• Potential energy, • potential energy of an object at a height, • law of conservation of energy. • Rate of doing work, • commercial unit of energy- kWh.	• explain the concept of potential energy with the help of examples and derive its expression. • State the law of conservation of energy	Establishing the relation between the loss in weight of a solid when fully immersed in a) Tap water b) Strongly salty water with the weight of water displaced by it by

			• Define power and give its SI unit. • Establish the relation between commercial unit of energy KWh and joules.	taking at least two different solids.
December	Sound	• Production of sound, • propagation of sound, • sound requires a medium to travel, • sound waves as longitudinal waves, • characteristics of a sound wave.	• Visualize sound as waves and explain that sound cannot produce without a vibrating object. • Explain the different characteristics of sound waves.	
January	Revision			