

BHARTIYA VIDYA MANDIR SENIOR SECONDARY SCHOOL
SECTOR-39, CHANDIGARH ROAD, LUDHIANA
SYLLABUS OF CLASS IX

BOOK: NCERT		SUBJECT : SCIENCE		SESSION : 2024-25	
PHYSICS					
Month	Unit/Chapter/Topic	Learning Objectives	Resources/Art-integrated pedagogy tools used		Learning Outcomes/ Skills learnt by students
			E-Resources		
APRIL	CH-7 MOTION	Student will be able to: 1) Understand the difference between displacement and distance. 2) Understand the uniform and non-uniform motion. 3) Represent graphically motion of any object. 4) Understand equations of motion 5) Understand the difference between velocity and speed. 6) Understand the concept of uniform circular motion 7) Distinguish the average velocity and average speed and their calculation. 8) Understand the concept of instantaneous velocity and acceleration.	TOOLS: Lecture method ,brain storming, chalk and board, Inquiry based learning.	https://www.youtube.com/live/oVtKocU-UdY?si=DI9DRFhGQoFL2A15	1) Students have learnt the concept of various terms related to motion such as distance, displacement, speed, velocity and difference between them. 2) Students have learnt the concept and examples of the uniform and non-uniform motion. 3) They have learnt to represent motion by using graph. 4) They have about equations of motion 5) They have understood the concept of average speed and velocity, uniform circular motion. SKILLS: *Scientific temper *Critical thinking *Problem solving
MAY	CH-8 FORCE AND LAWS OF MOTION	Students will be able to: 1) Understand about types of forces i.e. balanced and unbalanced forces. 2) Understand the concept of force. 3) Find the relation $F=ma$. 4) Understand the concept of inertia and its type. 5) Understand Newton's laws. 6) Formulate the Newton's second law of motion. 7) Understand the concept of momentum and impulse and their applications. 8) Understand application of all the three laws in our daily life.	TOOLS: Lecture method ,brain storming, chalk and board, Inquiry based learning.	https://youtu.be/0yggN7e1_Es?si=ZYNRITZn_zHW1v10	1) Students have learnt the concept of forces and its types, Newton's laws of motion. 2) Students have understood inertia and its types, momentum and impulse. 3) Students are able to observe applications of Newton's laws in our day to day life. SKILLS: *Observation *Analysis *Conclusion
JUNE	SUMMER VACATIONS				
JULY	CH-9 GRAVITATION	Students are able to: 1) Understand the concept of Newton's universal law of gravitation. 2) Understand the concept of free fall and acceleration due to gravity. 3) Understand the meaning and concept of mass and weight. 4) Differentiate between mass and weight.	TOOLS: * Discussion * Brain storming * Conceptual text learning	https://youtu.be/zxyjYR8JXxo?si=c17j73TvwPY16WLF	Students have understood: 1) The concept of Newton's universal law of gravitation. 2) The concept of free fall and acceleration due to gravity. 3) The meaning and concept of mass and weight. 4) The Difference between the acceleration due to gravity and universal gravitation constant. SKILLS: *Scientific temper *Critical thinking

AUGUST	CH-9 GRAVITATION	Students will be able to: 1) Differentiate between the acceleration due to gravity and universal gravitation constant. 2) Understand the concept of pressure and thrust. 3) Differentiate between pressure and thrust	TOOLS: * Discussion * Brain storming * Conceptual text learning	https://youtu.be/JO15_arGPSA?si=tcn9_89JGQOSUHgO	Students have understood : 1) The concept of pressure and thrust. 2) The Difference between pressure and thrust. 3) The formulas and its application for solving related numericals. SKILLS: * Problem solving * Calculations * Co-relation
SEPTEMBER	TERM-1 EXAMINATION				
OCTOBER	CH-9 GRAVITATION (FLOATATION)	Students will be able to: 1) Understand the meaning of density ,relative density and concept of buoyancy. 2) Understand the meaning and analyses the Archimedes' principle. 3) Understand about the laws of floatation.	TOOLS: Discussion method, Chalk and Board, Brainstorming.	https://www.youtube.com/live/UWzTbFIPBow?si=fyaAYUWJveQuCWiy	Students have learnt: 1) To apply the concept of Archimedes' principle when swimming or floating. 2) The concept of density and relative density. 3) To apply use of density and relative density in daily life. 4) About laws of floatation.
NOVEMBER	CH-10 WORK AND ENERGY	Students will be able to: 1) Define the concept of work and its type. 2) Understand the concept of energy and its type. 3) Identify different forms of energy in our surroundings. 4) Derive formula for kinetic and potential energy. 5) Understand and derive law of conservation of energy. 6) Differentiate between energy and work and their interconversion. 7) Understand the concept of power and average power	TOOLS: Discussion method, Chalk and Board, Brainstorming. ACTIVITY: To identify types of work in various situations.	https://youtu.be/Orzm5m2bcII?si=l8MKgAyngLZeoxXh	Students have learnt : 1) Concept of work and energy, forms of energy. 2) Law of conservation of energy, concept of power . 3) Derivations of kinetic and potential energy. 4) How to apply the concept of work in daily actions like person carries a load on his head. SKILLS: * Observation * Critical thinking * Identification
DECEMBER	CH-11 SOUND	Students will be able to learn: 1) Concept of sound and its propagation. 2) The meaning and concept of frequency, wavelength, time period. 3) Concept of loudness and pitch. 4) The meaning of intensity of sound. 5) The Difference between intensity of sound and loudness. 6) Concept of the reverberation of sound and its application. 7) Meaning of sonic boom and ultrasound and its application. 8) Concept of the SONAR.	TOOLS: Discussion method, Chalk and Board, Brainstorming, Concept mapping. ACTIVITY: To verify the laws of reflection of sound.	https://youtu.be/KWphn8yDbqs?si=a7hzO1jed4_icXUy	Students have understood and learnt: 1) Concept of sound propagation. 2) Terms like wavelength, frequency, time period, pitch, intensity, amplitude, loudness, shrillness etc. 3) Concept of echo and reverberation 4) Applications of reflection of sound in real life and appreciate their importance. SKILLS: * Communication * Critical thinking * Scientific attitude
JANUARY	PRE-ANNUAL EXAMINATION				
FEBRUARY	ANNUAL EXAMINATION				