



**JAYPEE PUBLIC SCHOOL,  
GREATER NOIDA  
WEEK WISE SYLLABUS  
SESSION-(2022-23)  
CLASS IX**

Content / Topic	1st Week	2nd Week	3rd Week	4th Week
<b>MONTH-APRIL</b> <b>Chapter 8:</b> Motion	<b>Chapter 8:</b> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Rest &amp; motion – Definition with Examples</li> <li>• Scalar and vector quantities</li> <li>• Motion along a straight line</li> <li>• Distance</li> <li>• Displacement</li> <li>• Uniform motion</li> <li>• Non uniform motion</li> </ul>	<b>Chapter 8:</b> <ul style="list-style-type: none"> <li>• Speed</li> <li>• Average speed</li> <li>• Speed with direction</li> <li>• Average velocity</li> <li>• SI units</li> <li>• Numerical</li> </ul>	<b>Chapter 8:</b> <ul style="list-style-type: none"> <li>• Acceleration and retardation</li> <li>• Uniform acceleration and non uniform acceleration</li> <li>• Numerical</li> </ul>	<b>Chapter 8:</b> <ul style="list-style-type: none"> <li>• Graph : concept and importance</li> <li>• Graphical representation of motion by x- t graph</li> <li>• Calculation of speed from x-t graph.</li> </ul>
<b>Practical</b>	<ul style="list-style-type: none"> <li>• Recognition of the apparatus .</li> <li>• <a href="https://youtu.be/FFGj6ODbeA8">https://youtu.be/FFGj6ODbeA8</a></li> </ul>			
<b>Learning Objectives</b>	Students will be able to <ul style="list-style-type: none"> <li>• Get aware about meaning of rest and motion</li> <li>• Differentiate between distance and displacement.</li> <li>• Calculate the average speed in a given situation.</li> <li>• State the examples of uniformly accelerated motion.</li> <li>• Understand the difference between acceleration and retardation</li> </ul>			
<b>Expected Learning Outcome</b>	The learners would be able to <ul style="list-style-type: none"> <li>• Understand that rest and motion are relative</li> <li>• To understand and evaluate the numerical value of different quantities and also associate it with their units.</li> <li>• To correlate various physical quantities like distance, displacement, average speed, acceleration and retardation etc with day to day observations.</li> </ul>			
<b>Teaching Aid</b>	<ul style="list-style-type: none"> <li>• E-Notes , You tube</li> <li>• <a href="https://youtu.be/1U8a4_1q9bo">https://youtu.be/1U8a4_1q9bo</a></li> <li>• <a href="https://youtu.be/21BwUNDOQno">https://youtu.be/21BwUNDOQno</a></li> <li>• <a href="https://youtu.be/VFfF3F-G9Uk">https://youtu.be/VFfF3F-G9Uk</a></li> </ul>			
<b>Assessment</b>	<ul style="list-style-type: none"> <li>• Class test</li> </ul>			

<b>Content / Topic</b>	<b>1st Week</b>	<b>2nd Week</b>	<b>3rd Week</b>	<b>4th Week</b>	<b>5th Week</b>
<b>MONTH-MAY</b> <b>Chapter 8:</b> Motion	<b>Chapter 8:</b> <ul style="list-style-type: none"> <li>graphical representation of motion by v - t graph</li> <li>Calculation of acceleration and distance from v-t graph</li> </ul>	<b>Chapter 8:</b> <ul style="list-style-type: none"> <li>Equations of motion by graphical method-</li> <li>Numerical based on graphs</li> </ul>	Chapter 8: <ul style="list-style-type: none"> <li>Equation for velocity time relation</li> <li>Equation for position time relation</li> <li>Equation for position velocity relation</li> </ul>	<ul style="list-style-type: none"> <li>Numerical problems based on equations of motion.</li> <li>Uniform circular motion</li> </ul>	Revision
<b>Practical</b>	<ul style="list-style-type: none"> <li>Recognition of the apparatus in the lab.</li> </ul>				
<b>Learning Objectives</b>	Students will be able to <ul style="list-style-type: none"> <li>Understand the importance of graphs for representing different types of motion.</li> <li>Identify the type of motion from d-t graph and v-t graph.</li> <li>Develop numerical solving skills</li> </ul>				
<b>Expected Learning Outcome</b>	The learners would be able to <ul style="list-style-type: none"> <li>Understand and evaluate speed, acceleration and distance from various graphs.</li> <li>Evaluate speed in circular motion</li> <li>Represent motion of given situation in graphical manner</li> </ul>				
<b>Teaching Aid</b>	E-Notes, You tube <a href="https://youtu.be/LwEFt0QWcVs">https://youtu.be/LwEFt0QWcVs</a> <a href="https://youtu.be/D2pyTCobuGs">https://youtu.be/D2pyTCobuGs</a>				
<b>Assessment</b>	Class test				

JULY

Content / Topic	1st Week	2nd Week	3rd Week	4th Week	5th Week
<b>MONTH-JULY</b> <b>Chapter 9 :</b> Force and Laws of Motion	<b>Chapter 9 :</b> <ul style="list-style-type: none"> <li>Force – Definition , effects</li> <li>Types of force</li> <li>Balanced and unbalanced forces.</li> </ul>	<b>Chapter 9 :</b> <ul style="list-style-type: none"> <li>Newton’s first law of motion</li> <li>Definition of inertia</li> <li>Reasoning questions based on first law.</li> </ul>	<b>Chapter 9 :</b> <ul style="list-style-type: none"> <li>Newton’s second law of motion.</li> <li>Derive <math>F = ma</math></li> <li>Momentum, Impulse – definition and units.</li> </ul>	<b>Chapter 9 :</b> <ul style="list-style-type: none"> <li>Reasoning questions and numericals based on second law.</li> <li>Newton’s &amp; third law of motion</li> </ul>	<b>Chapter 9:</b> <ul style="list-style-type: none"> <li>Reasoning Questions based on third law.</li> </ul>
<b>Practical</b>	Identify balance force and Unbalance force <a href="https://youtu.be/dufhaiuxgvk">https://youtu.be/dufhaiuxgvk</a>				
<b>Learning Objectives</b>	Students will be able to <ul style="list-style-type: none"> <li>Understand force and its effects</li> <li>Understand meaning of balanced and unbalanced forces</li> <li>Understand Newton’s laws and their applications in daily life.</li> <li>Explain the terms like inertia, impulse and momentum.</li> </ul> Calculate force acting on an object, the momentum associated with any moving object.				
<b>Expected Learning Outcome</b>	The learners would be able to <ul style="list-style-type: none"> <li>Differentiate between balanced and unbalanced forces</li> <li>Evaluate the numerical value of force and momentum.</li> <li>Explain the laws of motion in various situations.</li> </ul>				
<b>Teaching Aid</b>	E-Notes, You Tube <a href="https://youtu.be/erghLWXDSci">https://youtu.be/erghLWXDSci</a> <a href="https://youtu.be/ZvPrn3aBQG8">https://youtu.be/ZvPrn3aBQG8</a>				
<b>Assessment</b>	<ul style="list-style-type: none"> <li>Class test</li> </ul>				

MONTH-AUGUST

Content / Topic	1st Week	2nd Week	3rd Week	4th Week	5th Week
<b>Chapter 9 :</b> Force and Laws of Motion <b>Chapter 10:</b> Gravitation (Part I)	<b>Chapter 9 :</b> <ul style="list-style-type: none"> <li>Conservation of momentum.</li> <li>Numerical problems based on conservation of momentum</li> </ul>	<b>Chapter 10 :</b> <ul style="list-style-type: none"> <li>Introduction</li> <li>Newton’s Law of gravitation</li> <li>Numericals</li> </ul>	<b>Chapter 10:</b> <ul style="list-style-type: none"> <li>Free fall</li> <li>Difference between ‘g’ and ‘G’.</li> <li>Derive formula of ‘g</li> <li>Value of ‘g’ on earth.</li> </ul>	<b>Chapter 10:</b> <ul style="list-style-type: none"> <li>Factors on which ‘g’ depends.</li> <li>Equations of motion during free fall.</li> </ul>	<b>Chapter 10:</b> <ul style="list-style-type: none"> <li>Numericals based on free fall</li> <li>Difference between mass and weight.</li> <li>Weight of an object on moon</li> </ul>

<b>Practical</b>	Mass and Weight <a href="https://youtu.be/rFdbY_V7vIo">https://youtu.be/rFdbY_V7vIo</a>			
<b>Learning Objectives</b>	Students will be able to <ul style="list-style-type: none"> <li>• Understand the concept of conservation of momentum</li> <li>• Understand the importance of Newton's law of gravitation.</li> <li>• Differentiate between <math>g</math> and <math>G</math>; mass and weight.</li> <li>• Calculate quantities using equations of motion during a free fall.</li> </ul>			
<b>Expected Learning Outcome</b>	The learners would be able to <ul style="list-style-type: none"> <li>• Calculate change in momentum in different situations</li> <li>• Evaluate the numerical value of <math>g</math> at different places like earth and moon.</li> <li>• Calculate the weight of given object on moon and earth.</li> </ul>			
<b>Teaching Aid</b>	E-Notes , You Tube <a href="https://youtu.be/zy1Bb6Pp95s">https://youtu.be/zy1Bb6Pp95s</a> <a href="https://youtu.be/c9shwPMpSq8">https://youtu.be/c9shwPMpSq8</a>			
<b>Assessment</b>	Class _Test			
<b>MONTH: SEPTEMBER</b>	<b>1st Week</b>	<b>2nd Week</b>	<b>3rd Week</b>	<b>4th Week</b>
<b>Content / Topic</b>				
Revision	Revision & Mid term	Mid term	Mid term	<ul style="list-style-type: none"> <li>• Distribution and discussion of answer sheets</li> </ul>
<b>Practical</b>	Discussion of questions about practices			
<b>Learning Objectives</b>	Students will be able to <ul style="list-style-type: none"> <li>• know and correct the mistakes done in the answer sheets</li> </ul>			
<b>Expected Learning Outcome</b>	The learners would be able to <ul style="list-style-type: none"> <li>• Understand and evaluate the errors and mistakes done in the paper and would be able to improve upon the same through correction.</li> </ul>			
<b>Teaching Aid</b>	Sample Papers, Answer sheets and suggested answers			
<b>Assessment</b>	Class Tests , Mid Term Exam			

<b>MONTH: OCTOBER</b>	<b>1st Week</b>	<b>2nd Week</b>	<b>3rd Week</b>	<b>4th Week</b>	<b>5th Week</b>
<b>Content / Topic</b>					
<b>Chapter 10 :</b> Gravitation (Part II ) <b>Chapter 11:</b> Work and Energy	<b>Chapter 10:</b> <ul style="list-style-type: none"> <li>• Thrust</li> <li>• Pressure</li> <li>• Applications</li> </ul>	<b>Chapter 10:</b> <ul style="list-style-type: none"> <li>• Up thrust</li> <li>• Buoyancy</li> <li>• Why do objects float and sink?</li> </ul>	<b>Chapter 10:</b> <ul style="list-style-type: none"> <li>• Density</li> <li>• Relative density</li> </ul>	<b>Chapter 10:</b> <ul style="list-style-type: none"> <li>• Numericals based on density and relative density</li> </ul> <b>Chapter 11:</b>	<b>Chapter 11:</b> <ul style="list-style-type: none"> <li>• Positive and negative work</li> <li>• Numericals</li> </ul>

	<ul style="list-style-type: none"> <li>Numericals on Thrust and pressure</li> </ul>	<ul style="list-style-type: none"> <li>Archimedes Principle</li> <li>Numericals</li> </ul>		<ul style="list-style-type: none"> <li>Introduction</li> <li>Work done by constant force</li> </ul>	
<b>Practical</b>	<ul style="list-style-type: none"> <li>To determine density of solid (denser than water) by using a spring balance and a measuring cylinder  <a href="https://youtu.be/CzcdByf9ZC0">https://youtu.be/CzcdByf9ZC0</a>  <a href="https://youtu.be/bSg7M2NgKZA">https://youtu.be/bSg7M2NgKZA</a></li> </ul>				
<b>Learning Objectives</b>	Students will be able to <ul style="list-style-type: none"> <li>To explain the applications of thrust and pressure.</li> <li>Understand the concept of flotation.</li> <li>Relate Archimedes' principle with floating objects.</li> <li>Understand the formula for work.</li> </ul>				
<b>Expected Learning Outcome</b>	The learners would be able to <ul style="list-style-type: none"> <li>Solve numerical problems based on thrust and pressure.</li> </ul>				

<b>MONTH: NOVEMBER</b>	<b>1st Week</b>	<b>2nd Week</b>	<b>3rd Week</b>	<b>4th Week</b>
<b>Content / Topic</b>				
<b>Chapter 11: Work and Energy</b>	<b>Chapter 11:</b> <ul style="list-style-type: none"> <li>Energy and its forms</li> <li>Kinetic energy</li> <li>Derive the expression for KE</li> <li>Numericals on KE</li> </ul>	<b>Chapter 11:</b> <ul style="list-style-type: none"> <li>Potential energy</li> <li>Derive the expression for PE</li> <li>Numericals on PE</li> <li>Transformation of energy</li> </ul>	<b>Chapter 11:</b> <ul style="list-style-type: none"> <li>Law of conservation of energy</li> <li>Conversion of PE to KE during a free fall</li> </ul>	<b>Chapter 11:</b> <ul style="list-style-type: none"> <li>Power</li> <li>Commercial unit of electrical energy</li> <li>Relation between SI unit and commercial unit energy</li> <li>Numericals</li> </ul>
<b>Practical</b>	<ul style="list-style-type: none"> <li>To establish 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 taking at least two different solids</li> <li><a href="https://youtu.be/eIb4VQGoyvI">https://youtu.be/eIb4VQGoyvI</a></li> <li><a href="https://youtu.be/2RefIvqaYg8">https://youtu.be/2RefIvqaYg8</a></li> </ul>			
<b>Learning Objectives</b>	Students will be able to <ul style="list-style-type: none"> <li>Identify and list different types of energy.</li> <li>Understand the phenomenon of transformation of energy</li> <li>understand the relation between commercial and SI unit of energy.</li> </ul>			
<b>Expected Learning Outcome</b>	The learners would be able to <ul style="list-style-type: none"> <li>Comprehend various examples showing transformation of energy.</li> </ul>			

	<ul style="list-style-type: none"> <li>• Derive expression of KE and PE</li> <li>• Understand different types of energy.</li> </ul>
<b>Teaching Aid</b>	E-Notes , You Tube <a href="https://youtu.be/05WkCPORlj4">https://youtu.be/05WkCPORlj4</a> <a href="https://youtu.be/UKl33k-qQ0k">https://youtu.be/UKl33k-qQ0k</a> <a href="https://youtu.be/khc2wUBsFU4">https://youtu.be/khc2wUBsFU4</a>
<b>Assessment</b>	Class test

<b>Content / Topic</b>	<b>1st Week</b>	<b>2nd Week</b>	<b>3rd Week</b>	<b>4th Week</b>
<b>MONTH-DECEMBER</b> <b>Chapter 12 : Sound</b>	<b>Chapter 12:</b> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Production of sound</li> <li>• Propagation of sound</li> </ul>	<b>Chapter 12:</b> <ul style="list-style-type: none"> <li>• Sound needs medium to travel</li> <li>• Types of waves – Longitudinal and transverse waves</li> </ul>	<b>Chapter 12:</b> <ul style="list-style-type: none"> <li>• Characteristics of wave – Wavelength , speed , amplitude and frequency</li> <li>• Numericals</li> <li>• Speed of sound in different media</li> </ul>	<b>Chapter 12:</b> <ul style="list-style-type: none"> <li>• Reflection of sound</li> <li>• Echo</li> <li>• Numericals based on echo.</li> </ul>
<b>Practical</b>	<ul style="list-style-type: none"> <li>• To determine velocity of a pulse propagated through a stretched string/slinky  <a href="https://youtu.be/KFi519eXPMg">https://youtu.be/KFi519eXPMg</a></li> <li>• To verify laws of Reflection of sound  <a href="https://youtu.be/5bT0BQx9UI8">https://youtu.be/5bT0BQx9UI8</a></li> </ul>			
<b>Learning Objectives</b>	Students will be able to <ul style="list-style-type: none"> <li>• Understand the phenomena of production as well as the propagation of sound</li> <li>• List various characteristics of a wave</li> <li>• Differentiate between different types of waves.</li> <li>• Understand the phenomenon of reflection of sound</li> </ul>			
<b>Expected Learning Outcome</b>	The learners would be able to <ul style="list-style-type: none"> <li>• understand how the sound is produced and propagates</li> <li>• understand different types of waves and their Characteristics</li> <li>• To know about condition that is required for echo to take place</li> </ul>			
<b>Teaching Aid</b>	E-Notes ,You Tube <a href="https://youtu.be/ZTsLLBo8lNQ">https://youtu.be/ZTsLLBo8lNQ</a> <a href="https://youtu.be/WqnF-VPfGPw">https://youtu.be/WqnF-VPfGPw</a>			
<b>Assessment</b>	Class test			

Content / Topic	1st Week	2nd Week	3rd Week	4th Week	5th Week
<b>MONTH-JANUARY</b> <b>Chapter 12 : Sound</b>	Winter Break	Winter Break	<ul style="list-style-type: none"> <li>Recap of previous topics</li> </ul> <b>Chapter 12 :</b> <ul style="list-style-type: none"> <li>Reverberation</li> <li>Uses of multiple reflection of sound</li> </ul>	<b>Chapter 12:</b> <ul style="list-style-type: none"> <li>Range of Hearing</li> <li>Infrasound</li> <li>Ultrasound</li> <li>Applications of ultrasound</li> </ul>	<b>Chapter 12:</b> <ul style="list-style-type: none"> <li>SONA</li> <li>Working of a SONAR</li> <li>Numericals based on SONAR</li> </ul>
<b>Practical</b>			Practice of practical based questions		
<b>Learning Objectives</b>		Students will be able to <ul style="list-style-type: none"> <li>Understand the meaning of reverberation</li> <li>Comprehend the concept of ultrasound and its applications.</li> <li>Students will be able to solve numerical based on echo, SONAR etc.</li> </ul>			
<b>Expected Learning Outcome</b>		The learners would be able to <ul style="list-style-type: none"> <li>Apply concept of multiple reflection of sound in real life situations</li> <li>Understand the concept of ultrasound</li> <li>List the applications of ultrasound</li> <li>Calculate the distance using the concept of SONAR</li> </ul>			
<b>Teaching Aid</b>		Smart Class Module			
<b>Assessment</b>		<ul style="list-style-type: none"> <li>Note book Assessment</li> <li>Subject Enrichment Activity Assessment</li> </ul>			

Content / Topic	1st Week	2nd Week	3rd Week	4th Week	5th Week
<b>MONTH-FEBRUARY</b> <b>Chapter 12: Sound</b>	Chapter 12: <ul style="list-style-type: none"> <li>Structure of human Ea</li> <li>Functions of various parts of human Ear</li> </ul>	Revision	Revision	Final exam	Final exam
<b>Learning Objectives</b>			Students will be able to <ul style="list-style-type: none"> <li>To Understand the functions of various parts of human ear.</li> <li>To know and correct the mistakes done in the answer sheets of Final Examination.</li> </ul>		
<b>Expected Learning Outcome</b>			The learners would be able to <ul style="list-style-type: none"> <li>Explain working of human ear</li> <li>Understand and evaluate the errors and mistakes done in the paper and would be able to improve upon the same through correction</li> </ul>		



<b>Teaching Aid</b>	Sample papers, Answer sheets and suggested answers E Notes , notes <a href="https://youtu.be/C6ZQUmBg1eU">https://youtu.be/C6ZQUmBg1eU</a>
<b>Assessment</b>	Final Examination.

MARCH-

<b>Content/ Topic</b>	<b>1st Week</b>	<b>2nd Week</b>	<b>3rd Week</b>	<b>4th Week</b>
Final Examination.	-	-	-	-