

Subject : Science  
 Grade : IX  
 Year : 2018 -19

**Year Planner**

**Text book used: NCERT**

Month & No. of Teaching Days	Units	Sub- Units	Objectives	Activities Planned	Evaluation
<b>Mar-Apr (18)</b>	PHY: Ch-8 Motion	<ul style="list-style-type: none"> <li>Uniform and non-uniform Motion.</li> <li>Derivations and graphical analysis</li> </ul>	<ul style="list-style-type: none"> <li>Understand uniform and non-uniform motion of objects through study of graphs.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Textbook activity.</li> </ul>	Worksheet-1A (P & C)
	BIO:Ch-5 Fundamental unit of life	<ul style="list-style-type: none"> <li>➤ What are living organisms made up of?</li> <li>➤ What are cells made up of?</li> </ul>	<ul style="list-style-type: none"> <li>Know the structural organization of cell</li> <li>Learn the process by which food and water moves across the cell.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Temporary mount of onion peel cells (LA)</li> <li>➤ Percentage of water imbibed by raisins. (LA)</li> </ul>	Worksheet-1B (Bio)  <b>Slip Test-1</b>
<b>June (23)</b>	CHEM:Ch-1 Matter in our Surroundings.	<ul style="list-style-type: none"> <li>Characteristics; states of matter, inter-change, evaporation and boiling.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Understand about the different types of matter &amp; latent heat</li> </ul>	<ul style="list-style-type: none"> <li>➤ Melting of ice.</li> <li>➤ Boiling point of water (LA).</li> <li>➤ Sublimation (LA).</li> </ul>	Worksheet-2A (P & C)
	PHY:Ch-9 Force and Laws of Motion.	<ul style="list-style-type: none"> <li>Laws of motion</li> </ul>	<ul style="list-style-type: none"> <li>➤ Understanding the three laws of motion</li> </ul>	<ul style="list-style-type: none"> <li>➤ Textbook activity.</li> <li>➤ To verify Newton's third law of motion i.e. spring balance activity(LA)</li> </ul>	
	BIO:Ch-6 Tissues.	<ul style="list-style-type: none"> <li>Animal tissues and Plant tissues</li> </ul>	<ul style="list-style-type: none"> <li>➤ Identify and state functions of various types of tissues</li> <li>➤ Explain structural and functional characteristics of various types of simple and complex tissues.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Observation of Permanent slides:</li> <li>➤ Parenchyma tissues in plants (LA).</li> <li>➤ Sclerenchyma tissues in plants (LA).</li> <li>➤ Striped muscle fibers and nerve cells in animals (LA)-</li> <li>➤ Observe the growing roots of an onion.</li> </ul>	Worksheet-2B (Bio)

<b>July (24)</b>	PHY: Ch-9 Force and laws of Motion (cont).	<ul style="list-style-type: none"> <li>• Conservation of momentum</li> </ul>	<ul style="list-style-type: none"> <li>• Understand the concepts of Conservation of Momentum</li> </ul>	➤ Textbook activity	<b>Slip test -2</b> Worksheet- 3A (P & C)
	CHEM: Ch-2 Is matter around us pure?	<ul style="list-style-type: none"> <li>• Solutions, Mixtures, Physical and chemical changes</li> </ul>	<ul style="list-style-type: none"> <li>• Identify various types of solutions</li> <li>• Learn how to separate components of mixtures.</li> </ul>	<ul style="list-style-type: none"> <li>➤ To prepare Solution, Suspension and Colloidal solution (LA).</li> <li>➤ To prepare mixture and compound (LA).</li> <li>➤ To classify physical and chemical changes (LA).</li> </ul>	Worksheet-3B (Bio) <b>Revision Worksheet -1</b>
	<b>BIO: Ch-15</b> <b>Improvement in food resources .</b>	<ul style="list-style-type: none"> <li>• Improvement in crop yield Animal husbandry</li> </ul>	<ul style="list-style-type: none"> <li>• Describe the various activities for improving crop yield.</li> <li>• Discuss the various means of Crop Protection Management</li> </ul>	<ul style="list-style-type: none"> <li>➤ Textbook activity</li> <li>➤ To test the presence of adulterant metanil yellow in dal. (LA).</li> <li>➤ Test presence of starch (LA).</li> </ul>	<b>Periodic Test-I</b>
<b>Aug (21)</b>	<b>PHY:CH-10</b> <b>Gravitation.</b>  <b>CHEM:</b> <b>Revision</b>  <b>BIO:</b> <b>Revision</b>	<ul style="list-style-type: none"> <li>• Universal law of gravitation, Free fall, Mass and weight</li> <li>• Thrust and pressure Archimedes principle,</li> <li>• Relative density.</li> </ul>	<ul style="list-style-type: none"> <li>• Explain universal law of gravitation, force of gravity, acceleration due to gravity.</li> <li>• Describe thrust pressure and Archimedes principle</li> </ul>	<ul style="list-style-type: none"> <li>➤ Textbook activity.</li> <li>➤ To find minimum force required</li> <li>➤ To move a wooden block using spring balance (LA).</li> <li>➤ To calculate the density of a solid using spring balance (LA).</li> <li>➤ To measure the loss of weight of a solid when immersed in water. (LA)</li> <li>➤ Pressure exerted by cuboid (LA).</li> </ul>	Worksheet- 4A (P & C) Worksheet-4B (Bio)  <b>Slip test-3</b>
<b>Sept(10)</b>				<b>P.T-2 ( Half yearly Exam )</b>	<b>Subject Enrichment Evaluation -1</b> <b>Revision Worksheet-2</b>
<b>Oct (15)</b>	<b>PHY: Ch-11</b> <b>Work and Energy</b>	<ul style="list-style-type: none"> <li>• Work, Types of energy, Power.</li> </ul>	<ul style="list-style-type: none"> <li>• Define work and energy</li> <li>• Verify laws of conservation of energy.</li> </ul>	➤ Text book activity	Worksheet- 5A (P & C)  Worksheet-5B (Bio)

			<ul style="list-style-type: none"> <li>Identify the types of energy</li> <li>Understand concepts of Power and Commercial units of energy</li> </ul>		
	<b>CHEM: Ch-3 Atoms and molecules (till 3.2.3)</b>	<ul style="list-style-type: none"> <li>Laws of Chemical Combinations and atoms</li> </ul>	<ul style="list-style-type: none"> <li>Define the laws of chemical combination, conservation of mass and constant proportion</li> </ul>	<ul style="list-style-type: none"> <li>Text book activity</li> <li>To verify laws of conservation of mass (LA)</li> </ul>	<b>Slip Test- 4</b>
	<b>BIO: Ch.7 Diversity in living organisms</b>	<ul style="list-style-type: none"> <li>Classification of plant Kingdom.</li> </ul>	<ul style="list-style-type: none"> <li>Recognize the existence of diversity in living organisms and establish relationship between classification and evaluation.</li> <li>Understand the characteristics of the plant kingdom.</li> </ul>	<ul style="list-style-type: none"> <li>Study characteristics of Spirogyra, Agarius, Moss, Fern, Pinus and Angiosperms.</li> <li>To observe external features of root stem, leaf and flower of mono and dicot plants.</li> </ul>	Worksheet- 6A (P & C) Worksheet-6B (Bio)
Nov (19)	<b>CHEM: Ch.3 Atoms and molecules.</b>	<ul style="list-style-type: none"> <li>What is a molecule?</li> <li>What is an ion?</li> <li>Writing chemical formulae.</li> <li>Molecular mass and mole concept</li> </ul>	<ul style="list-style-type: none"> <li>Understand the Concept of molecules, ions, valency &amp; mole concept.</li> </ul>	<ul style="list-style-type: none"> <li>Textbook Activities/ Solving numericals based on mole concept</li> </ul>	<b>Slip Test -5</b>
	<b>BIO : Ch-7 Diversity in living organisms .</b>	<ul style="list-style-type: none"> <li>Animal kingdom</li> </ul>	<ul style="list-style-type: none"> <li>Learn the classification of kingdom into phylum and know their characteristics.</li> </ul>	<ul style="list-style-type: none"> <li>Textbook activity.</li> <li>To observe the specimens of earthworm, cockroach, bony fish, bird (LA).</li> </ul>	Worksheet- 7A (P & C) Worksheet-7B (Bio)
Dec (22)	<b>PHY: Ch-12 Sound .</b>	<ul style="list-style-type: none"> <li>Characteristics of sound, reflection of sound, Echo, Range of hearing,</li> <li>Application of Ultra-sound &amp; structure of human ear</li> </ul>	<ul style="list-style-type: none"> <li>Understand the nature of sound, reflection</li> </ul>	<ul style="list-style-type: none"> <li>Reflection of sound (LA).</li> <li>Velocity of pulse using slinky (LA).</li> </ul>	Worksheet- 8A (P & C) Worksheet-8B (Bio) <b>Slip test-6</b>
	<b>CHEM: Ch-4 Structure of Atom</b>	<ul style="list-style-type: none"> <li>Atomic Models</li> </ul>	<ul style="list-style-type: none"> <li>List the postulates of Dalton's atomic theory.</li> </ul>	<ul style="list-style-type: none"> <li>Textbook activity.</li> </ul>	

			<ul style="list-style-type: none"> <li>• Explain concepts of atomic mass and atomicity</li> </ul>		
	<b>BIO: Ch. 13 Why do we fall ill.</b>	<ul style="list-style-type: none"> <li>• Health and its failure</li> <li>• Diseases and its causes</li> <li>• Infectious Diseases</li> <li>• Principles of treatment</li> </ul>	<ul style="list-style-type: none"> <li>• Classify communicable diseases from non-communicable diseases.</li> <li>• Their prevention and treatment.</li> <li>• Explain the causes and kinds of diseases.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Life cycle of mosquito (LA).</li> </ul>	Worksheet- 8A (P & C)  Worksheet-8B (Bio) <b>Revision Worksheet-3</b>
<b>Jan (19)</b>	<b>CHEM: Ch-4 Structure of Atom</b>	<ul style="list-style-type: none"> <li>• Valency isotopes, isobars</li> </ul>	<ul style="list-style-type: none"> <li>• Know the different theories put forward to understand the structure of atom.</li> <li>• Calculate the valency of different types of elements.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Textbook activity</li> </ul>	<b>Subject Enrichment Evaluation -2</b>  Worksheet- 9A (P & C) Worksheet-9B (Bio)
	<b>BIO: Ch -14 Natural Resources</b>	<ul style="list-style-type: none"> <li>• The breath of life</li> <li>• Rain</li> <li>• Water</li> <li>• Minerals</li> <li>• Biogeochemical cycles</li> <li>• Ozone layer</li> </ul>	<ul style="list-style-type: none"> <li>➤ Study about Air Rain, Water &amp; Minerals.</li> <li>➤ Explain Bio geochemical cycles.</li> <li>➤ Discuss about Ozone layer.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Textbook activity</li> </ul>	Worksheet- 10A (P & C) Worksheet-10B (Bio)  <b>Revision Worksheet- 4</b>