

ACADEMIC PLANNER CLASS IX
CLASS - IX

MONTHS & DAYS	CONTENTS	LEARNING OUTCOMES	ACTIVITY / EXPERIMENT	ASSIGNMENT/ H.W	MODE OF ASSESSMENT	INTERDISCIPLINARY ASPECT	SUSTAINED IMPACT-SDG	21st CENTURY SKILLS	TEACHING PEDAGOGY
April 1-15									
No. of days-10									
Phy.	Chapter 7 : Motion : Describing motion, motion along a straight line, uniform and non uniform motion, speed with direction, rate of change of velocity	Understand the Concept of Motion: Students will be able to define motion and explain different types of motion, such as rectilinear motion, uniform motion, and non-uniform motion. Describe the Characteristics of Motion: Students will describe key features of motion, such as speed, velocity, acceleration, and displacement, and how they differ. Calculate and Interpret Equations of Motion: Students will be able to derive and use the equations of motion to solve numerical problems related to the motion of objects.	Examples from day to day life (Real life experiences will be discussed while travelling in different vehicles)	Intext Questions	Conceptual Questions Group Discussions Practical Experiments Interactive Polls/Quizzes	Physics and Mathematics: . Physics and Engineering: Physics and Technology: Physics and Sports: Physics and Environmental Science:	SDG 9: Industry, Innovation, and Infrastructure SDG 7: Affordable and Clean Energy SDG 13: Climate Action SDG 11: Sustainable Cities and Communities	Critical Thinking and Problem Solving: Collaboration and Teamwork: Creativity and Innovation: Communication Skills: Digital Literacy: Global Awareness and Sustainability: Adaptability and Flexibility: Self-Management:	Inquiry-Based Learning: Flipped Classroom: Problem-Based Learning: Interactive Learning with Simulations: Real-World Applications: Collaborative Projects:
Chem.	Chapter 1: Matter in our surroundings : Physical nature of matter, characteristics of particles of matter, state of matter, diffusion	define matter distinguish between the three states of matter Understanding of the temperature conditions required for these changes. develop skills to observe and experiment with the properties and behavior of matter	Activities given in ncert to be done in the classroom	Intext Questions	Multiple Choice Questions (MCQs): Practical/Experimental Questions: Quizzes and Polls:	Mathematics: Measurement and Calculations: Statistical Models:	SDG 12:	Collaboration: Group activities, such as experiments and discussions, can develop collaboration skills.	Inquiry-based learning, Experiential learning
Bio.	Chapter 5: The fundamental unit of Life: Discovery of cell, structural organization of a cell, plasma membrane, diffusion, osmosis	1. Understands different levels of organisations of living organisms (from molecules to organisms) 2. Understands structural organization of a cell, plasma membrane, diffusion, osmosis 3. Explores the structure and function of the living world at cellular level the cellular level	1) To prepare the temporary mount of onion peel.	Notes Preparation & Intext Questions	Class test group assignments and projects/ Information gathering	1. Maths in Calculation of cell sizes 2. Laws of refraction & image formation to understand the principle on which working of microscope	SDG 2 & 3	Critical thinking, creativity and collaboration	Experiential Learning: allowing students to connect scientific concepts to their daily lives and Direct instruction
				ONLINE EDUCOSOFT ASSESSMENTS					
April 16-30									
No. of days-12									
Phy.	Chapter 7 : Motion : graphs - distance/ time graph, velocity/ time graph		Draw the D-t and v-t graphs on graph paper and interpret the	Intext Questions					

No. of days-14									
Phy.	Chapter 8: Force and laws of motion: 2nd law of motion, momentum, 3rd law of motion		To verify Newton's third law of motion	TBQ and assignment					
Chem.	Chapter 2 : Is Matter around us pure : suspensions, colloidal solutions	Understand the concept of solutions, suspensions, and colloids. differentiate between them on the basis of their properties		Intext Questions	Class Discussions or Presentations: Experimentation and observations				
Bio.	Chapter 6: Tissues: animal tissues - epithelial tissue, connective tissue, muscular tissue, nervous tissue	1. Understands animal tissues - epithelial tissue, connective tissue, muscular tissue, nervous tissue 2. Is able to draw diagrams flow charts and mind maps	Permanent Slides: Striped muscle fibres, cardiac muscle fibres and nerve cells in animals from	Notes completion & Assignment	MCQs /Science Concept map written assessments as SAQs Viva		SDG 2 & 3	Problem solving, communication and collaboration	Experiential Learning: Student presentation Direct instruction Peer to peer
				ONLINE EDUCOSOFT					
	UNIT TEST- I (21 JULY-26 JULY)		Syllabus- Ch 1- Matter in our surroundings Ch-5 Fundamental unit of	Date of exam- 26 July 2025					
August 1-15									
No. of days-11									
Phy.	Chapter 9 : Gravitation: Universal law of gravitation, acceleration due to gravity	Understand the Law of Universal Gravitation: Students will be able to explain Newton's Law of Universal Gravitation and state that every object in the universe attracts every other object with a force that is proportional to the product of their masses and inversely proportional to the square of the distance between them. Calculate Gravitational Force: Students will be able to use the formula for gravitational force to solve problems involving gravitational forces. Explain Free Fall and Acceleration Due to Gravity: Students will understand the concept of free fall and the acceleration due to gravity, and they will be able to calculate the value of g on Earth and its implications.		Intext Questions	Conceptual Questions Worksheets and Quizzes Practical Activities Investigating how objects of different	Physics and Mathematics: Physics and Astronomy: Physics and Engineering: Physics and Environmental Science: Physics and Technology:	SDG 9: Industry, Innovation, and Infrastructure .SDG 7: Affordable and Clean Energy SDG 11: Sustainable Cities and Communities SDG 13: Climate Action SDG 14: Life Below Water	Critical Thinking and Problem Solving: Collaboration and Creativity and Innovation: Communication Skills: Digital Literacy: Global Awareness and Sustainability: Self-Management:	Inquiry-Based Learning: Problem-Based Learning: Flipped Classroom: Conceptual Teaching: Experiments and Demonstrations: Real-Life Connections:
Chem.	Chapter 2 : Is Matter around us pure : physical and chemical changes, elements and compounds	distinguish between physical and chemical properties of substances.	To prepare a mixture and compound using iron filings and sulphur powder	TBQ and assignment	Case Studies/Real-World Applications: Real-life scenarios to assess students' ability to identify				
Bio.	Chapter 15- Improvement in food resources :Introduction	1. Understands varieties of crop plants 2. Importance of green revolution	Nature walk to be organised	Notes Preparation	MCQs /Science Concept map written assessments as SAQs Viva	Geographical aspects associated with cultivation of different types of crops and soil types needed by them	SDG 2, 12 & 15	Critical thinking, communication Information literacy, flexibility and adaptability	Experiential Learning: Student presentation Direct instruction Peer to peer

Phy.	Chapter 10 : Work and energy : work,work done by a force, energy, forms of energy	Define Work and Energy: Students will be able to define work as the transfer of energy and explain its conditions (force must act in the direction of displacement). Understand and Apply the Formula for Work: Students will be able to use the formula $W=F \times d$ (work = force $\times$ displacement) to calculate work done by a force. Understand the Concept of Energy: Students will be able to define energy and understand its different forms, including kinetic energy, potential energy, and mechanical energy. Apply the Formula for Kinetic and Potential Energy: Students will be able to calculate kinetic energy and potential energy $PE=mgh$, and solve numerical problems. Understand the Law of Conservation of Energy: Students will learn that energy cannot be created or destroyed, only converted from one form to another, and apply the conservation of energy principle in various contexts. Understand Power: Students will be able to define power as the rate of doing work and calculate it using the formula.		Intext Questions	Conceptual Questions: Group Activities: Online Quizzes Experimentation: Project-Based Assessment Peer and Self-Assessment	Physics and Mathematics: Physics and Engineering: . Physics and Environmental Science: Physics and Technology: Physics and Biology:	SDG 7: Affordable and Clean Energy SDG 9: Industry, Innovation, and Infrastructure SDG 13: Climate Action SDG 12: Responsible Consumption and Production	Critical Thinking and Problem Solving: Students apply the laws of energy conservation and work-energy principles to solve real-world problems, such as calculating the energy efficiency of machines or finding ways to minimize energy waste in various systems. Collaboration and Teamwork: Through group projects and experiments, students collaborate to design models or solve problems. This promotes teamwork and the ability to share ideas and find solutions together.	Inquiry-Based Learning: Encourage students to explore energy transformations by designing their own experiments. For example, students can investigate how energy is transferred in different machines or how potential energy in a raised object is converted into kinetic energy when it falls. Problem-Based Learning: Provide real-world problems where students must apply the laws of work and energy to solve challenges. For example, how would you design a more energy-efficient vehicle or a solar-powered device?
Chem.	Chapter 3: Molecular Mass and formula unit mass	Understanding how to calculate the atomic mass of elements and molecular mass of compounds.		TBQ and assignment	Peer Assessment: In group discussions or presentations, peers can assess				Elmated Classroom
Bio	Health and Diseases: Health and its failure. Infectious and Non-infectious diseases, their causes and manifestation. Diseases caused by microbes (Virus, Bacteria and Protozoans) and their prevention; Principles of treatment and prevention. Pulse Polio programmes.	1.Students will understand Health and Diseases: Health and its failure .2. Infectious and Non-infectious diseases, their causes and manifestation. 3. Diseases caused by microbes (Virus, Bacteria and Protozoans) and their prevention; Principles of treatment and prevention. Pulse Polio programmes.		Intext Questions	Interactive quizzes and oral discussions		SDG 3	Critical thinking, communication Information literacy, flexibility and adaptability	Experiential Learning: Student presentation Direct instruction Peer to peer learning Group work
				ONLINE EDUCOSOFT					
November 1-15									
No. of days-11									
Phy	Chapter 10 : Work and energy : K.E			Intext Questions					

Chem.	Ch 4- Structure of atom: thomson model	Recognize the historical development of the atomic model, including the contributions of scientists like Dalton, Thomson, Rutherford, and Bohr. Understand Dalton's atomic theory and how it laid the foundation for the study of atoms. Identify the basic structure of an atom, which consists of protons, neutrons, and electrons. Learn about the location of these subatomic particles (protons and neutrons in the nucleus, electrons orbiting the nucleus).		Intext Questions	Group presentation	History and Philosophy:	SDG 9: Industry, Innovation, and Infrastructure The study of atoms is a foundation for technological innovation. It is crucial for students to understand atomic behavior as it relates to the development of new materials.	Critical Thinking and Problem-Solving Application: Understanding the structure of atoms, identifying subatomic particles, and their properties helps students enhance their ability to	Interactive Teaching Methods Demonstrations: If possible, show a simple demonstration, like using a ball-and-stick model to represent atoms, to help students visualize atomic structure.
Bio.	Ch-5 Recapitulation			Extra Questions					
				ONLINE EDUCOSOFT					
November 16-30									
No. of days-12									
Phy.	P.E, Law of conservation of energy, power			TBQ and assignment					
Chem.	Chapter 4 : Structure of atom : Bohr's model	Study Bohr's model of the atom and how it explains the arrangement of electrons in specific orbits or energy levels around the nucleus.			Comparison with Other Models: Compare the Bohr model with other atomic models, such as the Rutherford model				
Bio.	Ch-5 Recapitulation			ONLINE EDUCOSOFT					
December 1-15									
No. of days-12									
	Unit Test -2 (8 Dec- 15 dec)		Ch 3 Atoms and Molecules	Date of Exam- 15 December 2025					
			Ch 10 Work and Chapter 15-						

Phy.	Chapter 11 - Sound : Production of sound propagation of sound, characteristics of sound.	Understand the Nature of Sound: Students will define sound as a mechanical wave that requires a medium to travel and recognize sound as a form of longitudinal wave. Describe the Properties of Sound: Students will explain key properties of sound waves, such as frequency, wavelength, amplitude, and velocity, and understand how these properties relate to pitch and loudness. Understand the Speed of Sound: Students will be able to calculate and explain the factors affecting the speed of sound, including the medium (air, water, solids) and temperature. Explain Reflection of Sound: Students will understand and explain the reflection of sound (e.g., echo) and its applications in daily life (e.g., sonar, ultrasound). Explore the Phenomenon of Resonance: Students will explain resonance and how it occurs in musical instruments or objects vibrating at their natural frequency. Understand the Applications of Sound: Students will recognize the practical applications of sound, such as in communication (e.g., telephones, radios), medical diagnostics (e.g., ultrasound), and sonar.	To determine the velocity of a pulse propagated through a stretched string/slinky	Intext Questions	Conceptual Questions Worksheets: Provide worksheets with multiple-choice questions (MCQs) and fill-in-the-blank questions to test basic concepts and encourage students to apply their knowledge to new scenarios. Interactive Quizzes: Hands-on Activities Project-Based Assessment	Physics and Music: Physics and Engineering: Physics and Biology: Physics and Communication Technology: Physics and Environmental Science:	SDG 3: Good Health and Well-Being SDG 9: Industry, Innovation, and Infrastructure SDG 11: Sustainable Cities and Communities SDG 12: Responsible Consumption and Production	Critical Thinking and Problem Solving: Collaboration and Teamwork: Digital Literacy: Communication Skills: Global Awareness and Sustainability: Self-Management and Time Management:	Inquiry-Based Learning: Experiential Learning: Flipped Classroom: Project-Based Learning: Real-Life Applications: Collaborative Learning:
Chem	Chapter 4 : Structure of atom: distribution of electrons, Sub atomic particles, valency	Learn to calculate the atomic number (number of protons) and the mass number (sum of protons and neutrons) of an atom.							
Bio	Ch-6 Recapitulation								
				ONLINE EDUCOSOFT ASSESSMENTS					
December 16-31									
No. of days-13									
Phy.	Chapter 11 - Sound : Speed of sound, reflection of sound,echo,		To verify the laws of reflection of sound	Intext Questions					
Chem	Chapter 4 : Structure of atom: Isotopes, Isobars, applications of isotopes	Define isotopes and isobars, and understand the difference between them. Study examples of isotopes (such as carbon-12 and carbon-14) and their applications.		Intext Questions	Diagram-based Questions (Labeling or Matching) Students may be				
Bio	Revision								
				ONLINE EDUCOSOFT					
JANUARY 1-15	WINTER BREAK								
No. of days-3									
Phy	applications of reflection of sound, reverberation			Intext Questions					

Chem.	Ch 4 - mass number, atomic number			Intext Questions	MCQ/ Written test				
Bio.	Revision								
				ONLINE EDUCOSOFT					
January 16-31									
No. of days-13									
Phy	range of hearing			TBQ and assignment					
Chem.	Revision			TBQ and					
Bio.	Revision								
			NO						
February 1-15									
No. of days-11									
Phy/Chem/Bi	REVISION								
February 16-28									
No. of days-12									
Phy/Chem/Bi	ANNUAL EXAMS		Complete Book						
March									
No. of days-24	ANNUAL EXAMS								