

VIDYA PRATISHTHAN'S NEW BAL VIKAS MANDIR, PIMPLI BARAMATI

Annual Curriculum Plan of Science (2023-24)

Std : IX A, B & C

Month	Topic	Learning Outcomes	Subject Enrichment Activity
April	<p>Chapter No. 8 [Physics] Motion</p> <p>Chapter No. 1 [Chemistry] Matter in our surroundings</p> <p>Chapter No. 5 [Biology] The Fundamental Unit of Life</p>	<p>Students will be able to describe motion along a straight line, explain and differentiate between speed and velocity as well as uniform and non-uniform motion.</p> <p>Students will learn how to draw a distance-time graph.</p> <p>Students will understand the particle nature of matter and it's characteristics.</p> <p>Students will be able to explain the states of matter, the concept of latent heat of fusion and vapourisation and the effect of change of pressure.</p> <p>Students will learn about the factors affecting evaporation.</p> <p>Students will study the structural organization of a cell. They will learn the structure and functions of different cell organelles such as plasma membrane, nucleus, mitochondria etc. They will also learn to differentiate between a plant cell and animal cell.</p>	<p>Students will solve numerical based on three equations of motion.</p> <p>Students will solve numerical based on three equations of motion.</p> <p>Concept map: States of matter.</p> <p>Lab Activity – Students will observe the different types of cells with the help of permanent slides and make a temporary slide of Onion peel to observe its cells.</p>

June	<p>Chapter No. 9 [Physics] Force and Laws of Motion</p> <p>Chapter No. 2 [Chemistry] Is Matter Around Us Pure? [2.1 and 2.2]</p> <p>Chapter No. 6 [Biology] Tissues [6.1 and 6.2]</p>	<p>Students will be able to differentiate between (a) Balanced and Unbalanced forces (b) Action and Reaction forces Students will understand the concepts of mass and inertia.</p> <p>Students will learn about the different types of mixtures, solutions and suspensions. Students will understand the properties of mixtures, solutions and suspensions.</p> <p>Students will learn about different types of plant tissues such as meristematic tissues, permanent tissues etc. Students will be able to differentiate between the structure and functions of animal and plant tissues.</p>	<p>Experiential Learning Activity: i) Students will learn how to measure the weight by using spring balance. ii) understanding Newton's First Law Eg: Kicking the football, ball rolling on inclined plane.</p> <p>Write down the properties of solution, suspension and colloid in a tabular form.</p> <p>Experiential Learning Activity: Students will collect a plant stem and prepare slide of T.S. of a stem and observe different types of cells and their arrangement under the microscope.</p>
		Pre – Mid Term Examination, July 2023	
July	<p>Chapter No. 10 [Physics] Gravitation [10.1 to 10.2]</p> <p>Chapter No. 2 [Chemistry] Is Matter Around Us Pure? [2.4 and 2.5]</p> <p>Chapter No. 6 [Biology] Tissues [6.3]</p>	<p>i. Students will learn the concept of gravitation. ii. Students will be able to explain the universal law of gravitation. iii. Students will learn to calculate the value of acceleration due to gravity (g).</p> <p>Students will know the physical and chemical changes and types of pure substances. ii) They will be able to differentiate between mixtures and compounds.</p> <p>Students will learn about different types of animal tissues such as epithelial tissues, muscular tissues etc. Students will be able to differentiate between structure and functions of animal and plant tissues.</p>	<p>Playground Activity: How gravity affects the motion of the ball in upward and downward direction.</p> <p>Lab Activity - Students will perform an experiment to prepare true solution using material provided.</p> <p>Lab Activity - Students will observe the different types of plant tissues with the help of permanent slides.</p>

August	Chapter No. 10 [Physics] Gravitation [10.3 to 10.7]	Students will be able to calculate weight of an object on the moon. They will be able to differentiate between mass and weight. Students will understand Archimedes' Principle and its application in day-to-day life.	How gravity acts on the objects having different mass. (videos of Prof. H. C. Varma)
	Chapter No. 3 [Chemistry] Atoms and Molecules [3.1 and 3.2]	Children will learn the laws of chemical combination. Students will understand the concept of atomic mass and symbols of atoms of different elements.	Students will make a chart of elements found in human body and their functions.
	Chapter No. 15 [Biology] Improvement in Food Resources	Students will understand the importance of crop yield improvement and management. Students will learn about Animal Husbandry.	Students will collect grains or seeds of cereals, pulses and oil seeds and gather information about the season in which they are sown or harvested.
September	Chapter No. 11 [Physics] Work and Energy [11.1 to 11.12]	Students will be able to define work, describe the work done by force. They will understand the difference between kinetic energy and potential energy.	Students will solve the numerical related to work and energy. ii) Derive the expression for Kinetic energy and Potential Energy.
Revision for Mid Term Examination, September 2023			
	Chapter No. 15 [Biology] Improvement in Food Resources	Students will understand the importance of crop yield improvement and management. Students will learn about Animal Husbandry.	Students will collect grains or seeds of cereals, pulses and oil seeds and gather information about the season in which they are sown or harvested.
Mid Term Examination, September 2023			

October	Chapter No. 11 [Physics] Work and Energy [11.13 to 11.17]	Students will be able to verify the Law of Conservation of Energy. Students will use the formulae to calculate work and power.	Students will solve the numerical to find the work done and power. Experimental Learning Activity Students will form the formulae of different compounds with the help of cardboard cutouts.
	Chapter No. 3 [Chemistry] Atoms and Molecules [3.3.3 to 3.5.3]	Students will be able to write the chemical formulae of different compounds. Students will be able to calculate the molecular mass and formula unit mass of molecules	Students will draw and explain the structure of an atom of the element respective to their Roll Numbers.
November	Chapter No. 12 [Physics] Sound [12.1 to 12.2]	Students will be able to understand propagation of sound, types of sound waves, amplitude and frequency of vibration. They will distinguish between loudness and pitch.	Interaction with the band students.
	Chapter No. 4 [Chemistry] Structure of the Atom [4.3 and 4.4]	Students will be able to draw the electronic configuration of the elements having atomic number 1 to 20.	Students will draw and explain the structure of an atom of the element respective to their Roll Numbers.
December	Chapter No. 12 [Physics] Sound [12.3 to 12.6]	Students will understand the application of Ultrasound in SONAR system.	Students will observe the construction of ceilings of Gadima auditorium
	Chapter No. 4 [Chemistry] Structure of the Atom [4.5 and 4.6]	Students will understand the Electronic Configuration and the concept of valency, atomic number and atomic mass number. Students will learn about isotopes and isobars.	Students will creatively draw diagrams to show the electronic configuration of atoms of five different elements.
		Post - Mid Term Examination, December 2023	
January		Revision	

		Annual Examination, February 2024	
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