P.M. ENGLISH MEDIUM SCHOOL, DHINOJ

Yearly Plan for Standard IX

Academic Session 2024-2025

Subject: Science

Month	No. of teaching Days	Assessment	Chapter Details	Experiments	Learning Outcomes
APRIL		01	Chapter 1: Matter in our surroundings(C) Chapter-5 The Fundamental Unit of Life (B) Chapter 7: Motion (P)	**Ex:**To observe and learn parts of microscope **Ex:** To prepare slides of onion peel and human cheek cells. **Ex:**To prepare true solutions of common salt, sugar and alum, suspension, solution & colloidal solutions. and check its transparency, filtration and stability.	**Chapter-5** ● Students will understand the concept of using microscopes. ● Apply the concept of Diffusion and Osmosis ● The functions of different organelles ● Differentiate between types of cells Prokaryotic and eukaryotic. **Chapter 1:**Understand the concept of matter and its characteristics, state the three different states of matter and their properties. **Chapter 7:** Students will be able to understand about the following points- ● To know about the meaning of rest and motion. Relative term understanding. ● Distance and displacement, velocity, uniform and non-uniform motion along a straight line.

JUNE	**16**	I Periodic test Ch. 1,5 & 7	Ch:1Matter in our surroundings Continued...(C) Chapter-5 The Fundamental Unit of Life (B)(Continue…. Chapter 7: Continued (P) Chapter 8: Force and Laws of Motion (P)	**Ex.** Preparation of a a) mixture b) Compound using iron filing and sulfur powder	**Chapter 1:** To understand the concept of temperature, melting, boiling, freezing, Sublimation, Evaporation and factors affecting evaporation, Evaporation causes cooling. Chapter5: Students will able to: ● Differentiate between Plant cell and Animal Cell. ● Understands the functions of different organelles. **Chapter 7:** Students will be able to understand about the following points- ● Acceleration, distance-time and velocity-time graphs for uniform motion and uniformly accelerated motion. ● Elementary idea of uniform circular motion. **Chapter 8:** Students will be able to understand about the following points - ● Force and Motion. ● Newton's Laws of Motion. ● Action and Reaction forces. ● Inertia of a body. ● Inertia and mass.

JULY	**24**		Chapter 2: Is matter around us pure (C) Chapter-6 Tissue (B) Chapter 8: Continued (P) Chapter 9: Gravitation (P)	**Ex.** Observe Tyndal effect in colloidal solution, true solution, and suspension. **Ex.** To identify physical and chemical changes. **Ex:** To identify the Simple and permanent tissues of Parenchyma,Collenchyma and Sclerenchyma , Xylem & Phloem. **Ex.** Determination of the density of solid (denser than water) by using a spring balance and a measuring cylinder.	**Chapter 2:** Understand the concept of pure substance and mixture, understand the concept about solution, colloidal solution, suspension. **Chapter 6:** ● To make understanding about various categories of plant tissues & animals and their location, structure and function.. ● To make them understand about division of labor, Process of Differentiation.
					Chapter 8: Students will be able to understand about the following points - ● Momentum, Force and Acceleration. **Chapter 9:** Students will be able to understand about the following points - ● Universal Law of Gravitation, Force of Gravitation of the earth (gravity). ● Acceleration due to Gravity, Mass and Weight; Free fall.

AUGUST	**19**	(23rd aug) Half Yearly	Chapter6 Tissues(B)Continue… Chapter 2: Is matter around us pure (C) Continued….. Chapter 9: Continued (P)	**Ex.** Establishing 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.	**Chapter 2:** To know how to find out the concentration of the solution, Differentiate b/w compounds and mixture. **Chapter 6:** ● Differentiate between Simple and Complex tissue. ● To make them familiar from different types of Simple tissue (Parenchyma,Collenchyma and Sclerenchyma) ● To make students familiar with complex tissues like Xylem and Phloem. **Chapter 9:** Students will be able to understand about the following points - ● Thrust and Pressure. ● Archimedes' Principle. ● Buoyancy.
SEPT	**10**		Revision		
OCT.	**18**		Chapter-6 Tissue(B)Continue… Chapter 3: Atoms and molecules (C) Chapter 10: Work and Energy (P)		**Chapter 3:** Understand the basic concept of element, molecule and compounds, Differentiate between the molecule, elements and molecules of compound, Understand the law of chemical combination. **Chapter6:** ● To understand the complexity of Animal Tissu**e.**

					• To familiarize with Epithelial tissue, Connective Tissue , Adipose tissue, Adipose &Nervous tissue. • Differentiate the function of the different tissues and its importance . **Chapter 10:** Students will be able to understand about the following points - • Work done by a Force. • Energy, Kinetic and Potential energy. • Law Of Conservation of energy.
NOV.	**17**		Chapter-15 Improvement in Food Resources.(B) Chapter 3: Atoms and molecules (C) Continued…. Chapter 10: Continued (P)		**Chapter 3:** To know about positive and negative ions, writing formulas of the chemical compounds, finding out molecular mass. **Chapter-15:** • Understands the sources of nutrients and their importance. • To familiarize with different types of crops • Able to understand need in crop variety improvement • Crop production improvement • Crop protection management **Chapter 10:** • To understand the conversion / transformation of work into various forms of energies. • Evaluate the numerical values in work or kinetic and potential energy. • Power.

DEC	**10**		Chapter-15 Improvement in Food Resources (Continue…) Chapter 4 : Structure of atom (c) Chapter 11: Sound (P)	**Ex.** Verification Of the Laws of Reflection of sound.	**Chapter 4:** Understanding about the presence of charged particles in metals, To know about Thomson model of atom and its drawbacks, **Chapter-15** ● To understand the factors of crop variety improvement and production. ● To Apply scientific concepts by adopting different methods for crop
					improvement like Intercropping and Crop rotation. **Chapter 11:** ● To evaluate the production of sound, nature of sound and its propagation in various media. ● speed of sound and characteristics of the sound waves.
JAN	**22**		Chapter-15 Improvement in Food Resources (Continue…) Biology: Project Presentation. Chapter 4 : Structure of atom (c) Continued…… Chapter 11: Continued (P)	**Ex.** Determination of the speed of a pulse propagated through a stretched string/slinky.	**Chapter 4:** To know about Rutherford's gold foil experiment, Bohr's model of atom, Distribution of electron in orbits, Valency, Finding out atomic and mass number, Isotopes 1.To understand about cattle farming, poultry farming, fisheries and bee keeping. **Chapter 11:** ● To understand the concept of range of hearing in humans, ultrasound. ● Reflection of sound and its applications, echo.
FEB	**18**		7th Feb Syllabus completion Revision		
March	**0**				
Total	**175**				

.