

KOTHARI INTERNATIONAL SCHOOL
GRADE: 9
SUBJECT: SCIENCE SUBJECT CODE: (086)
ANNUAL PLANNER (2023-24)

TERM	MONTH	TOPIC	SUBJECT ENRICHMENT
<p><u>1. PERIODIC ASSESSMENT 1</u> 25% of the total syllabus (Period- 24th APRIL – 19th May)</p>	<p>APRIL Working Days -15</p>	<p><u>1. THE FUNDAMENTAL UNIT OF LIFE</u></p> <p>Cell as a basic unit of life; prokaryotic and eukaryotic cells, multicellular organisms; cell membrane and cell wall, cell organelles and cell inclusions; chloroplast, mitochondria, vacuoles, endoplasmic reticulum, Golgi apparatus; nucleus, chromosomes - basic structure, number</p> <p><u>2. MOTION</u></p> <p>Distance and displacement, velocity; uniform and non-uniform motion along a straight line; acceleration, distance-time and velocity-time graphs for uniform motion and uniformly accelerated motion, elementary idea of uniform circular motion.</p>	<p>To prepare stained temporary mounts of</p> <p>(a) onion peel and</p> <p>(b) human cheek cells and to record observations and draw their labelled diagrams.</p>
	<p>MAY Working Days -19</p>	<p><u>1.MATTER IN OUR SURROUNDINGS</u></p>	<p>To determine the melting point of ice and the boiling point of water.</p>

		<p>Definition of matter; solid, liquid and gas; characteristics - shape, volume, density; change of state melting (absorption of heat), freezing, evaporation (cooling by evaporation), condensation, sublimation..</p> <p><u>2. FORCE AND LAWS OF MOTION</u></p> <p>Balanced and Unbalanced forces Force and Motion, Newton's Laws of Motion, Action and Reaction forces, Inertia of a body, Inertia and mass, Momentum, Force and Acceleration.</p>	
<p><u>2. PERIODIC ASSESSMENT 2</u> 40% of the total syllabus (Period- 24th July to 11th August)</p>	<p>JULY Working Days -22</p>	<p><u>1. TISSUES</u> Plant tissues Animal tissues</p> <p><u>2. IS MATTER AROUND US PURE</u> Elements, compounds and mixtures. Heterogeneous and homogenous mixtures, colloids and suspensions. Physical and chemical changes (excluding separating the components of a mixture)</p>	<p>To identify parenchyma and sclerenchyma tissues in plants, striped muscle fibres and nerve cells in animals, from prepared slides and to draw their labelled diagrams.</p> <p>To prepare</p> <ol style="list-style-type: none"> a true solution of common salt, sugar and alum a suspension of soil, chalk powder and fine sand in water a colloidal of starch in water and egg albumin in water and distinguish between these on the basis of transparency,

			<p>filtration criterion and transparency.</p> <p>To prepare</p> <ul style="list-style-type: none"> a) a mixture b) a compound using iron filings and sulphur powder and distinguish between these on the basis of: <ul style="list-style-type: none"> (i) appearance, i.e., homogeneity and heterogeneity (ii) behaviour towards a magnet (iii) behaviour towards carbon disulphide as a solvent (iv) effect of heat <p>To carry out the following reactions and classify them as physical or chemical changes:</p> <ul style="list-style-type: none"> a) Iron with copper sulphate solution in water b) Burning of magnesium ribbon in air c) Zinc with dilute sulphuric acid d) Heating of copper sulphate crystals. e) Sodium sulphate with barium chloride in the form of their solutions in water.
<p>PERIODIC ASSESSMENT 2 (80 MARKS/Duration of 3 hrs.) 60 % of the total syllabus Period-16thSept to 30th Sept) Revision Days- 8thSept to 14th Sept</p>			

<p>3. Half Yearly Exam 70% of the total syllabus (Period- 8th Sep to 20th Sep)</p>	<p>AUGUST Working Days -19</p>	<p><u>1.ATOMS AND MOLECULES</u> Atoms and molecules, Law of Chemical Combination, Chemical formula of common compounds, Atomic and molecular masses.</p> <p><u>2.STRUCTURE OF THE ATOM</u> Electrons, protons and neutrons, Valency, Atomic Number and Mass Number, Isotopes and Isobars.</p>	<p>To verify the law of conservation of mass in a chemical reaction.</p>
	<p>SEPTEMBER Working Days- 20</p>	<p><u>Revision & Examination</u></p>	
	<p>OCTOBER Working Days - 19</p>	<p><u>1.GRAVITATION</u> Gravitation; Universal Law of Gravitation, Force of Gravitation of the earth (gravity), Acceleration due to Gravity; Mass and Weight; Free fall</p> <p><u>2. IMPROVEMENTS IN FOOD RESOURCES</u> Plant and animal breeding and selection for quality improvement and management; Use of fertilizers</p>	<p>To determine the density of solid (denser than water) by using a spring balance and a measuring cylinder. 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.</p>

		and manures; Protection from pests and diseases; Organic farming.	
<u>4. PERIODIC ASSESSMENT 3</u> 30 % remaining syllabus (Period-06th Nov. to 30th Nov.)	NOVEMBER Working Days- 16	<u>1. WORK AND ENERGY</u> Work done by a Force, Energy, power; Kinetic and Potential energy; Law of conservation of energy (excluding commercial unit of Energy).	
	December Working Days- 22	<u>1. SOUND</u> Nature of sound and its propagation in various media, speed of sound, range of hearing in humans; ultrasound; reflection of sound; echo.	
	JANUARY Working Days -16	<u>Revision</u>	
<u>5. FINAL ASSESSMENT</u> (80 MARKS/Duration of 3 hrs.) 100 % Syllabus (Period-5th Feb. to 16th Feb. 2023)	FEBRUARY Working Days - 16	<u>Revision & Examination</u>	