

KOTHARI INTERNATIONAL SCHOOL
GRADE: 9
SUBJECT: SCIENCE SUBJECT CODE: 086
ANNUAL PLANNER (2021-22)

S.No	TERM	MONTH	TOPIC	SUBJECT ENRICHMENT
1.	<p><u>PRE MID TERM</u></p> <p><u>PERIOD</u> - (5th April -19th May)</p> <p>(30% of the Annual syllabus to be completed 25 % of annual syllabus will come in Assessment-1)</p> <p><u>REVISION</u> - (20th May-28th May & 1st - 2nd July)</p> <p><u>ASSESSMENT 1</u>- (5th July-14th July)</p> <p>Time: 1.5 hrs Marks: 40</p>	<p>APRIL Working Days -18</p>	<p><u>THE FUNDAMENTAL UNIT OF LIFE</u></p> <p>Structure and function of the organelles in plant and animal cells</p> <p><u>MATTER IN OUR SURROUNDINGS</u></p> <ul style="list-style-type: none"> ● Physical nature of Matter ● Characteristics of particles of Matter ● States of Matter ● Change of State of Matter ● Factors affecting evaporation. <p><u>MOTION</u></p> <ul style="list-style-type: none"> ● Vector and Scalar Quantity ● Displacement & Distance ● Uniform and Non- Uniform Motion ● Speed and Velocity ● Acceleration 	<ul style="list-style-type: none"> ● To prepare stained temporary mounts of (a) onion peel and (b) human cheek cells and to record observations and draw their labelled diagrams. ● To determine the melting point of ice and the boiling point of water.
		<p>MAY Working Days -18</p>	<p><u>TISSUES</u></p> <ul style="list-style-type: none"> ● Plant tissues 	<ul style="list-style-type: none"> ● To identify parenchyma and sclerenchyma tissues in plants, striped muscle fibres and

			<ul style="list-style-type: none"> • Animal tissues <p><u>IS MATTER AROUND US PURE</u></p> <p>Mixture Solution, Suspension and Colloid Pure substances Physical and chemical changes</p>	<p>nerve cells in animals, from prepared slides and to draw their labelled diagrams.</p> <ul style="list-style-type: none"> • To prepare <ul style="list-style-type: none"> a) a true solution of common salt, sugar and alum b) a suspension of soil, chalk powder and fine sand in water c) a colloidal of starch in water and egg albumin in water and distinguish between these on the basis of transparency, filtration criterion and transparency. • To prepare <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 • To carry out the following reactions and classify them as physical or chemical changes : <ul style="list-style-type: none"> a) Iron with copper sulphate solution in water b) Burning of magnesium ribbon
--	--	--	---	--

				<p>in air</p> <p>c) Zinc with dilute sulphuric acid</p> <p>d) Heating of copper sulphate crystals</p> <p>e) Sodium sulphate with barium chloride in the form of their solutions in water.</p>
2.	<p><u>MID TERM</u></p> <p><u>PERIOD</u> - (15thJuly- 10th Sept)</p> <p>(70 % of annual syllabus to be completed 60% of syllabus will be coming for the Mid Term)</p> <p><u>REVISION</u> - (13thSept- 17th Sept)</p> <p><u>ASSESSMENT 2</u> - (20thSept- 30th Sep)</p> <p>Assessment Time: 3 hrs Marks: 80</p>	<p>JULY Working Days -21</p>	<p><u>IS MATTER AROUND US PURE</u></p> <p>Separating the components of mixture.</p> <p><u>FORCE AND LAWS OF MOTION</u></p> <ul style="list-style-type: none"> Balanced and Unbalanced forces First law of motion. Second law of motion Third law of motion Momentum Conservation of momentum 	<ul style="list-style-type: none"> To separate the components of a mixture of sand, common salt and ammonium chloride (or camphor) by sublimation.
		<p>AUGUST Working Days -20</p>	<p><u>IMPROVEMENT IN FOOD RESOURCES</u></p> <ul style="list-style-type: none"> Improvement in crop yield Animal husbandry <p><u>STRUCTURE OF THE ATOM</u></p> <ul style="list-style-type: none"> Charged particles in matter Structure of an atom Distribution of electrons in shells Atomic number and mass number <p>Isotopes and isobars</p>	

			<p><u>GRAVITATION</u></p> <ul style="list-style-type: none"> • Universal law of Gravitation • Free Fall • Mass and Weight • Thrust and Pressure. • Archimedes' Principle • Relative Density 	<ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> a) tap water b) strongly salty water, with the weight of water displaced by it by taking at least two different solids.
		<p>SEPTEMBER Working Days- 22</p>	<p><u>ATOMS AND MOLECULES</u></p> <ul style="list-style-type: none"> • Laws of chemical combination • Writing Chemical formulae • Basics of Mole concept • 	<ul style="list-style-type: none"> • To verify the law of conservation of mass in a chemical reaction.
3	<p><u>POST MID TERM</u></p> <p><u>PERIOD</u> – (1stOct–30th Nov)</p> <p>(100 % of annual syllabus to be completed 90% of syllabus will be coming for the Mid Term)</p> <p><u>REVISION</u> – (1st Dec – 8th Dec)</p> <p><u>ASSESSMENT 3</u> – (10th Dec–21st Dec)</p>	<p>OCTOBER Working Days -16</p>	<p><u>ATOMS AND MOLECULES</u></p> <ul style="list-style-type: none"> • Numericals based on mole concept <p><u>WORK AND ENERGY</u></p> <ul style="list-style-type: none"> • Work • Energy • Kinetic and Potential Energy • Law of Conservation of energy • Power <p><u>DIVERSITY IN LIVING ORGANISMS</u></p> <ul style="list-style-type: none"> • Basis of classification • Classification in the plant and animal kingdom 	<ul style="list-style-type: none"> • To study the characteristic of Spirogyra/Agaricus, Moss/Fern, Pinus (either with male or female cone) and an Angiospermic plant. Draw and give two identifying features of the groups they belong to. • To observe the given

				<p>pictures/charts/models of earthworm, cockroach, bony fish and bird. For each organism, draw their picture and record:</p> <p>a) one specific feature of its phylum.</p> <p>b) one adaptive feature with reference to its habitat.</p> <ul style="list-style-type: none"> To study the external features of root, stem, leaf and flower of monocot and dicot plants.
		<p>NOVEMBER Working Days – 18</p>	<p><u>WHY DO WE FALL ILL</u></p> <ul style="list-style-type: none"> Health and its failure Disease and its causes Infectious diseases <p><u>SOUND</u></p> <ul style="list-style-type: none"> Propagation of Sound Characteristics of sound waves Reflection of Sound Human Ear Applications of Ultrasound <p><u>NATURAL RESOURCES</u></p> <ul style="list-style-type: none"> Air Water Soil 	<ul style="list-style-type: none"> To verify the Laws of reflection of sound. To determine the velocity of a pulse propagated through a stretched string/slinky.
		<p>DECEMBER Working Days -22</p>		
5.	<p>Term End Assessment (100 % of annual syllabus)</p>	<p>JANUARY Working Days -15</p>		

	<u>REVISION</u> – (22nd Dec–31st Jan)			
	<u>ASSESSMENT 4</u> - (1st Feb – 14th Feb)			