

CURRICULUM PLAN 2080 SCIENCE GRADE X					
FIRST TERMINAL EXAMINATION					
Unit	Topics	Working hrs	Teaching methods	Teaching materials	Evaluation & technique tools
1	<u>Scientific Learning</u> <ul style="list-style-type: none"> Variables and its types Importance of control variable Differences between fundamental unit and derived units Dimension Analysis Analysis of equation 	5	1. Discussion 2. Question answer 3. Practical 4. Demonstration	Chart of units	1. Class Test 2. Homework 3. Viva 4. Judgement of problem solving 5. Project work
2	<u>Classification of organism</u> <ul style="list-style-type: none"> Concept of five kingdom system Characteristics of phylum or division of plantae & animalia Classification of angiosperm upto class Classification of vertebrate upto class Relation between organic evolution and classification of organism 	9	1. Discussion 2. Question answer 3. Practical 4. Demonstration	Chart, videos, museum specimen, Herbarium,	1. Class Test 2. Homework 3. Viva 4. Drawing 5. Project work
3.	<u>Life cycle (Honey bee)</u> <ul style="list-style-type: none"> Describe the types of honey bee Describe the life cycle of honey bee Mention the importance of honey and honey bee 	4	1. Discussion 2. Question answer 3. Practical 4. Field visit and Demonstration	Chart, videos, etc.	1. Class Test 2. Homework 3. Viva 4. Drawing 5. Project work
6	<u>Nature and the Environment</u> <ul style="list-style-type: none"> Climate change- Introduction, causes and effects Preventive measures of climate change Endangered animals and their conservation Rare plants and their conservation Medicinal plants used in ancient period and their conservation 	7	1. Discussion 2. Question answer 3. Practical 4. Demonstration	Chart, videos, etc	1. Class Test 2. Homework 3. Viva 4. Drawing 5. Project work
7	<u>Force and Motion</u> <ul style="list-style-type: none"> Concept of Gravitation and solving mathematical problem related to Gravitation Introduction of acceleration due to gravity and its relation from center to the surface of the earth Concept of Gravitational force and method to calculate weight of an object Introduction to free fall Concept of freefall and its application in daily life 	10	1. Discussion 2. Question answer 3. Practical 4. Demonstration 5. Problem solving	Chart, spring balance, pan balance, parachute model, etc	1. Class Test 2. Homework 3. Viva 4. Drawing 5. Project work

8	<u>Pressure</u> <ul style="list-style-type: none"> • Pascal Law, demonstration and application in daily life • Concept of upthrust in liquid & gas • Archimedes principle, its demonstration and application in daily life 	5	1. Discussion 2. Question answer 3. Practical 4. Demonstration	Ureka can, pan balance, plastic bag, spring balance, hydrometer, lactometer, etc.	1. Class Test 2. Homework 3. Viva 4. Drawing 5. Project work
9	<u>Heat</u> <ul style="list-style-type: none"> • Introduction of thermal energy • Molecular movement and its effects in volume • Anamolous expansion of water and its importance • Concept of specific heat capacity and solving problem related with it • Working principle of thermometer • Types of thermometer – Laboratory, clinical and digital thermometer • Concept of temperature scale 	10	1. Discussion 2. Question answer 3. Practical 4. Demonstration 5. Problem solving	Beakers, thermometer, sprit lamp, tripod stand, etc.	1. Class Test 2. Homework 3. Viva 4. Drawing 5. Project work
12	<u>The universe</u> <ul style="list-style-type: none"> • Role of gravitational force in universe • The Big Bang Theory • The Hubble Constant • Future of universe, related to gravitation 	5	1. Discussion 2. Question answer 3. Practical 4. Demonstration	Chart, videos, etc	1. Class Test 2. Homework 3. Viva 4. Drawing 5. Project work
14	<u>Classification of elements</u> <ul style="list-style-type: none"> • Mendelev's Periodic Law • Modern Periodic Law • Electronic configuration of elements (upto atomic number 20) on the basis of sub-shell • Classification of elements in modern periodic table, (Group, period, S-block, P-block, d-block and f-block) • Positon of metals, non-metals and metalloid • Atomic size, electronegativity, electropositivity, valency • Reactivity of elements 	9	1. Discussion 2. Question answer 3. Practical 4. Demonstration	Chart, periodic table, etc	1. Class Test 2. Homework 3. Viva 4. Project work
15	<u>Chemical Reaction</u> <ul style="list-style-type: none"> • Types of chemical reaction with examples • Factors which affect rate of chemical reaction (with example) 	6	1. Discussion 2. Question answer 3. Practical 4. Demonstration	Laboratory apparatus like beaker, conical flask, different chemicals, etc.	1. Class Test 2. Homework 3. Viva 4. Drawing 5. Project work
	<u>Revision</u>	70			

	<u>MID TERMINAL EXAMINATION</u>				
4	<p align="center"><u>Heredity</u></p> <p><u>a. Chromosome</u></p> <ul style="list-style-type: none"> • Introduce the concept of mitosis and meiosis with their importance • Define chromosome and Gene • Differentiate between DNA & RNA • Describe sex determination in Human • Introduce the types of chromosomes <p><u>b. Genetics</u></p> <ul style="list-style-type: none"> • Mention the reasons for selecting pea plant by Mendel • Give the process of Monohybrid cross • Describe the laws of Mendel related with monohybrid cross • Introduce genetic technology and its application 	16	1. Discussion 2. Question answer 3. Practical 4. Demonstration	Chart, videos, DNA model, etc.	1. Class Test 2. Homework 3. Viva 4. Drawing 5. Project work
10	<p align="center"><u>Light</u></p> <ul style="list-style-type: none"> • Refraction of light and its laws • Total internal refraction of light, sound and its importance • Dispersion of light, its demonstration and application in daily life • Lens, terms related to lens and ray diagrams • Ray diagrams with different position of objects and nature of image • Power of lens and magnification • Uses of convex and concave lens • Process of formation of image in human eye • Defects of eyes, causes, correction of defects with diagram • Effects of corneal injury on vision • Introduction of night blindness, colour blindness and cataract. 	15	1. Discussion 2. Question answer 3. Practical 4. Demonstration 5. Drawing	Glass slab, Lenses, camera, telescope, microscope, spectacles, prism, model of human eye ball, etc.	1. Class Test 2. Homework 3. Viva 4. Drawing 5. Project work
13	<p align="center"><u>Information Technology</u></p> <ul style="list-style-type: none"> • Concept of digital signal, its transmission and uses • Negative Effect of digital technology • Netizenship • Different software of audio and video • Online reputation • Cutting and joining audio video 	10	1. Discussion 2. Question answer 3. Practical 4. Demonstration	Battery, bulb, wire, thermometer, chart, Internet, Videos, computer, software,	1. Class Test 2. Homework 3. Viva 4. Project work

16	<u>Some Gases</u> <ul style="list-style-type: none"> • Lab preparation of carbondioxide and ammonia • Properties of CO₂ and NH₃ • Uses of CO₂ and NH₃ • Acid rain:- causes, effects and control measures • Green house effects: Causes, effects and control measures 	8	1. Discussion 2. Question answer 3. Practical 4. Demonstration	Chemicals, gas preparation apparatus, match box, litmus paper, model of artificial greenhouse etc.	1. Class Test 2. Homework 3. Viva 4. Drawing 5. Project work
17	<u>Metals</u> <ul style="list-style-type: none"> • Introduction of minerals and ores • Ores of iron, copper, aluminium and silver • Process of separating metals from their ores 	5	1. Discussion 2. Question answer 3. Practical 4. Demonstration	Chart	1. Class Test 2. Homework 3. Viva 4. Drawing 5. Project work
19	<u>Chemicals used in daily life</u> <ul style="list-style-type: none"> • Introduction and methods of food preservation • Chemicals used in cleaning (lemon, Reetha and Ash) • Soap and detergents • Insecticides and Precaution while using insecticides • Chemical pollution, causes, effects and controls 	6	1. Discussion 2. Question answer 3. Practical 4. Demonstration 5. Field visit	Chemicals, lemon, reetha, ash, soap, detergents, video of chemical pollution, etc	1. Class Test 2. Homework 3. Viva 4. Drawing 5. Project work
	<u>Revision</u>	60			
	<u>Pre Qualifying EXAMINATION</u>				
5	<u>Circulatory system</u> <ul style="list-style-type: none"> • Describe the composition of blood • Describe the structure of heart and blood vessels • Blood circulation in Human body • Blood groups & their identification • Introduction, causes, effects and preventive measures of high blood pressure, uric acid, diabetes • Heart attack- causes and preventive measures 	12	1. Discussion 2. Question answer 3. Practical 4. Demonstration	Chart, Videos, model of Heart, Chart of blood group, stethoscope, sphygmomanometer etc.	1. Class Test 2. Homework 3. Viva 4. Drawing 5. Project work
11	<u>Current Electricity and Magentism</u> <ul style="list-style-type: none"> • Difference between AC and DC current • Effects of magnetic field in straight wire and solenoid with figure. • Introduction of magnetic force of line and magnetic flux • Concept of electromagnetic induction, its laws and application (device based in electromagnetic induction) • Working principle of dynamo and AC generator 	12	1. Discussion 2. Question answer 3. Practical 4. Demonstration 5. Field visit	Battery, wires, bulbs, fuse wire, electromagnet, electric bell, cycle dynamo, model of transformer, galavanometer, etc.	1. Class Test 2. Homework 3. Viva 4. Drawing 5. Project work

	<ul style="list-style-type: none"> Transformer-Structure, working principle, types and uses and solving numeric problems Motor effect- Introduction, devices based on this principle and working principle 				
18	<p><u>Hydrocarbon and its compound</u></p> <ul style="list-style-type: none"> Introduction of hydrocarbon with examples Differences between saturated and unsaturated hydrocarbon Molecular formula, structural formula, IUPAC name of hydrocarbon and their uses (upto 3 carbon atoms) Types of alcohol on the basis of number of hydroxide Methanol, Ethanol and Glycerol (Molecular formula, structural formula and uses) 	6	1. Discussion 2. Question answer 3. Practical 4. Demonstration	Chart, glycerine, etc.	1. Class Test 2. Homework 3. Viva 4. Drawing 5. Project work
	<u>Revision</u>	30			