## HANSRAJ MODEL SCHOOL

## PUNJABI BAGH, NEW DELHI CURRICULUM PLAN

SESSION: 2024-2025 SUBJECT: SCIENCE

**CLASS: VIII** 

MONTH	TOPIC / SUB TOPICS	LEARNING INTENTIONS	ACTIVITIES	ASSIGNMENTS
APRIL	CHAPTER-18: EARTHQUAKE  (Internal Assessment)  • Earthquake and its effects • Causes of an earthquake • Focus and epicentre • Predicting an earthquake • Measuring of an earthquake • Protection against earthquake • Safety precautions-After and During Earthquake	<ul> <li>Learners will be able to-</li> <li>Explain the concept of earthquake and its cause.</li> <li>Define the terms epicentre, focus.</li> <li>Suggest the measures to be taken during and after earthquake.</li> <li>Creative thinking ability, Capacity for working in team and Organisational skills</li> </ul>	<ul> <li>Make a model of seismometer to measure the Earthquake.</li> <li>Gather information about a specific earthquake location given by teacher to prepare a map, collage etc.</li> <li>Mock Drill on DO's and Don'ts during an Earthquake.</li> </ul>	Assignment 1 Page No 342 Question- D(2, 3, 5)  Assignment 2 Page No342;343 Question-E(3, 4, 5)

APRIL No. of Working Days-23	CHAPTER-19: POLLUTION OF AIR  (Internal Assessment)  Pollution Air pollution: causes Harmful effects of CO, nitrogen dioxide, smog, CFCs and Acid Rain Green House Effect and Global Warming Causes of increase in concentration of greenhouse gases and its consequences Global warming: consequences Global warming: consequences and measures Methods to control air pollutions	<ul> <li>Understand the meaning of pollution and its causes.</li> <li>Explain the concept of acid rain and its harmful effects.</li> <li>Enumerate the different consequences of global warming and steps to check it.</li> <li>Promote psychomotor, imaginative, creative artistic and curiosity skills.</li> </ul>	<ul> <li>Enlist AQI of at least 10 locations in Delhi for three consecutive days at a specific time.</li> <li>Time to Act- Make signage to create awareness in the society about ill effects of air pollution.</li> <li>Rewrite or reframe any nursery rhyme in context of 'Air Pollution'.</li> </ul>	Assignment 3: Page No356 Question -D (1, 2, 3, 4, 5)  Assignment 4: Page No.356 Question -E(1, 2, 3, 4, 5)
	CHAPTER-4: FORCE AND PRESSURE  • Force and effects of forces	Learners will be able to- •Define force, pressure along with their units.	<ul> <li>Encourage students to prepare Hovercraft</li> <li>Demonstration of activities to show properties of liquid</li> </ul>	Assignment 5: Page No82 Question-D (3, 5, 6)

	<ul> <li>Balanced and unbalanced force</li> <li>Types of forces:         <ul> <li>Contact and non-contact force</li> </ul> </li> <li>Pressure and its applications</li> <li>Liquid pressure: properties</li> <li>Atmospheric pressure and variation in air pressure</li> <li>Importance of atmospheric pressure</li> </ul>	<ul> <li>•Understand the factors affecting force. •Explain the different types of forces.</li> <li>•Apply the concept of pressure (both air and liquid) with daily life experiences.</li> <li>• Develop Literacy skills like information, media, and technology as well as learning skills like critical thinking, collaboration, and communication.</li> <li>•Students will be able to Appy ,adapt and innovate the things available to them.</li> </ul>	pressure through short video.  Demonstration of activities based on properties of air pressure using balloons, bottles etc.  Tug of war is a sport that pits two teams against each other to test their strength using a rope.  After playing the game with family members/ friends, share your experience of types of force coming into existence in the form of a paragraph with a picture depicting position of your team in the game.	Assignment 6: Page No. 83 Question-E(3, 5, 7)
MAY No. of Working Days-17	<ul> <li>CHAPTER-5: FRICTION</li> <li>Concept of friction</li> <li>Cause of friction</li> <li>Factors affecting friction</li> <li>Types of friction: Static, sliding and rolling</li> </ul>	<ul> <li>Learners will be able to-</li> <li>Understand the concept of friction and its cause.</li> <li>Explain the different types of friction.</li> <li>Appreciate that friction is a necessary evil.</li> </ul>	<ul> <li>Hands on experience to demonstrate various factors affecting friction.</li> <li>Imagine that friction was to suddenly vanish. Write a short story on how would our lives be affected.</li> </ul>	Assignment 7: Page No106,107 Question- D (1, 2, 5, 6)  Assignment 8: Page No.107,108 Question- E (1, 2, 3)

MAY	<ul> <li>Friction: necessity and nuisance</li> <li>Increasing and reducing friction fluid friction</li> </ul>	<ul> <li>Apply methods of increasing and decreasing friction.</li> <li>Develop- Effective oral and written communication, Analyse information, Curiosity and imagination</li> </ul>	<ul> <li>To show pictures of different situations to the students where friction is involved followed by reflective questions which include whether friction is a friend or foe.</li> <li>Prepare a PPT on methods of increasing or decreasing friction advantages and disadvantages of friction</li> </ul>	
	CHAPTER-8: CONSERVATION OF PLANTS AND ANIMALS  (Internal Assessment)  • Deforestation: domestic and global consequences • Conservation of biodiversity • Biosphere reserves • National parks • Wildlife Sanctuaries • Flora and Fauna • Endemic Species • Red Data Book	<ul> <li>Justify various ways of conservation of plants and animals.</li> <li>Describe the importance of biodiversity.</li> <li>Understand the importance of national parks and wildlife sanctuaries.</li> <li>Establish love for nature to conserve</li> </ul>	<ul> <li>To prepare a recycled paper using scrap paper.</li> <li>To make a brochure on any 5 National Parks/ Wildlife Sanctuary of India.</li> <li>To make a picture gallery on Endangered/ Extinct/ Vulnerable species of animals and birds in India.</li> <li>Prepare a poster on Conservation of Animals.</li> <li>In the outline map of India label: Nilgiri Biosphere Reserve, Nandadevi National Park, Sunderban National Park, Jim Corbett National</li> </ul>	Assignment 9: Page No150 Question-D(1,2,3,4)  Assignment 10: Page No150,151 Question-(E- 1,3,5)

	<ul> <li>Migration</li> <li>Reforestation</li> <li>Recycling of paper</li> </ul>	and preserve, Arrive at experimental results, comparison, and research. • Develop Literacy skills like information, media, and technology as well as learning skills like critical thinking, collaboration, and communication.	Park, Sariska Wildlife Sanctuary, Kaziranga National Park, Bandipur National Park.	
JULY No. of Working Days-25	<ul> <li>CHAPTER-6: SOURCES OF ENERGY</li> <li>Classification of sources of energy</li> <li>Fossil fuels</li> <li>Wood as a fuel</li> <li>Coal: occurrence, formation and types</li> <li>Destructive distillation and its products</li> </ul>	<ul> <li>Learners will be able to-</li> <li>Classify the sources of energy on the basis of their occurrence, physical state and availability.</li> <li>Know about the occurrence of fossil fuel and their processing.</li> <li>Appreciate the importance of alternate sources of energy.</li> </ul>	<ul> <li>To gather information about various types of sources of energy followed by preparation of flow chart on classification of sources on the basis of occurrence, physical state and availability.</li> <li>Show graphically an increase in cost of petrol in last few years.</li> <li>In the outline map of India mark the following places where coal mines</li> </ul>	Assignment 11: Page No118 Question-D (1, 2, 3, 4, 5)  Assignment 12: Page No118,119 Question-E(2, 3,4)

	<ul> <li>Petroleum:     Occurrence, refining     and products</li> <li>Natural gas</li> <li>Cleaner fuels</li> </ul>	Think critically and empathetically, will show concern towards environment	are located: Jharkhand, Madhya Pradesh, Odisha, West Bengal	
JULY	CHAPTER-7: COMBUSTION  Combustion: necessary conditions Types of combustion Fire control Incomplete combustion Flame: zones of candle flame Fuel and calorific value Characteristic of a good fuel Harmful effects of good fuel	<ul> <li>Understand the term combustion and the conditions required for combustion.</li> <li>Differentiate between types of combustion.</li> <li>Learn about various methods for controlling fire.</li> <li>Come to know about different zones of a candle flame.</li> <li>Appreciate the properties of a good fuel.</li> <li>Develop- Effective oral and written communication, Analyse information, Curiosity and imagination</li> </ul>	<ul> <li>Draw a colourful diagram to show different zones of a candle flame.</li> <li>Collect information about various types of fire extinguisher (Class A to Class F) and types of fire extinguishers with the help of each type. Explain nicely with related pictures to be pasted. (To be done on scrap file/drawing sheets)</li> <li>Demonstration of activity to show-         <ul> <li>Air is a necessary for combustion</li> <li>Ignition temperature should be achieved for combustion</li> <li>CO<sub>2</sub> extinguishes fire</li> </ul> </li> </ul>	Assignment 13: Page No134 Question-D(All parts)  Assignment 14:- Page No134,135 Question-E(All parts)

	CHAPTER-16: ELECTRIC CURRENT AND Its CHEMICAL EFFECTS   Conductors and insulators Conduction through liquid: cause Electrolytes Voltaic cell Electrolysis: applications Electroplating and its application EMI- phenomenon and applications	<ul> <li>Learners will be able to-</li> <li>Understand the concept of electrolyte and cause of conductivity.</li> <li>Learn about electroplating and its applications.</li> <li>Appreciate the importance of EMI in generation of electricity.</li> <li>Develop Literacy skills like information, media, and technology as well as learning skills like critical thinking, collaboration, and communication.</li> </ul>	<ul> <li>To exhibit voltaic cell to the students followed by display of its construction/circuit diagram on coloured sheets.</li> <li>Prepare a video to show demonstration of electrolysis of water/ to check conductivity of an electrolyte/ using a continuity tester.</li> <li>Demonstration of electroplating of Cu on Zn rod.</li> <li>To prepare model to show conversion of magnetic energy into electrical energy.</li> </ul>	Assignment 15: Page No297,298 Question-D (1, 2, 5)  Assignment 16: Page No298,299 Question-E(1, 4, 5, 6)
AUGUST  No. of Working  Days-23	CHAPTER-13: SYNTHETIC FIBRES AND PLASTICS   • Natural fibres and synthetic fibres • Rayon, nylon, terylene, PET and acrylic	<ul> <li>Learners will be able to-</li> <li>Compare synthetic and natural fibres.</li> <li>Understand the advantages and disadvantages of synthetic fibres.</li> <li>Learn the properties of synthetic fibres.</li> <li>Classify materials as thermoplastic and thermosetting.</li> </ul>	<ul> <li>Paste samples of different kinds of fabrics and plastics.</li> <li>Clothes made from synthetic fibres take lots of time to decompose. So, do not dump your old</li> </ul>	Assignment 17: Page No251 Question-D(All parts)  Assignment 18: Page No251,252 Question-E(1, 2, 3, 4)

AUGUST	<ul> <li>Advantage and disadvantage of synthetic fibres</li> <li>Characteristics of synthetic fibres</li> <li>Types synthetic plastics: characteristics</li> <li>Plastics and environment</li> <li>Damage caused by plastics wastes</li> <li>Measures to control the damaged caused by plastic wastes</li> </ul>	<ul> <li>Discuss the measures to control damage caused synthetic plastic.</li> <li>Develop psychomotor skills and will show concern towards environment.</li> </ul>	clothes into trash. Prepare something new from your old clothes like apron, bag, mat etc. Make a short video displaying its steps wise step preparation.  Make a planter using PET bottles/ Discarded materials.  Organise a debate among students on the topic, My fabric is superior  Device an activity to show that organic waste is biodegradable while plastic is not	
	CHAPTER-1: THE CELL: ITS STRUCTURE AND FUNCTIONS   Discovery of cell The cell- variation in cell number, shape and size Parts of cell Cell organelles Level of organisation in an organism	<ul> <li>Understand the concept of cell as a basic structural and functional unit of life.</li> <li>Explain the different parts of cells along with their functions.</li> <li>Contrast the plant cell with animal cell.</li> <li>Organize the levels of organization in an organism.</li> </ul>	<ul> <li>To show a temporary mount of onion peel and cheek cell.</li> <li>To make a diagram of a plant cell/ nerve cell/ animal cell using material like threads, buttons, pulses, e-wastes, ribbons etc.</li> <li>Prepare a jigsaw puzzle on plant cell/animal cell</li> </ul>	Assignment 19: Page No13,14 Question- D (2, 3, 4,6)  Assignment 20: Page No14 Question- E(2, 3, 4)

	Plant cell and animal cell: diagram and comparison	<ul> <li>Draw diagrams and think creatively</li> <li>Learn leadership, flexibility, creativity, experimental, analysing, and synthesizing skills.</li> </ul>		
AUGUST	CHAPTER-2: MICRO-ORGANISMS: FRIENDS OR FOES  Introduction: types of microorganisms  Virus are unique Existence of microorganism Microorganism: friends and foes Food poisoning Food preservation	<ul> <li>Learners will be able to-</li> <li>Learn about different types of microbes and their habitats.</li> <li>Understand the concept of food preservation and apply its techniques.</li> <li>Compare the uses and harms of microbes.</li> <li>Appreciate the role of microbes in daily life as friends.</li> <li>Develop- Effective oral and written communication, Analyse information,</li> </ul>	<ul> <li>Prepare a video to show any method of preservation.</li> <li>To prepare a tabular chart for at least 10 diseases for which vaccination is done in India.</li> <li>Collect the labels from the bottles of jams and jellies and enlist the preservatives mentioned on labels.</li> </ul>	Assignment 21: Page No33 Question- D (1, 2, 4, 5)  Assignment 22: Page No33,34 Question-E(1, 4,6)

		Curiosity and imagination		
OCTOBER  No. of Working Days-20	CHAPTER-20: POLLUTION OF WATER  (Internal Assessment)  • Water pollution: cause • Potable water • Purification of water: Physical and chemical method • Treatment of major sources of water pollution: Sewage and industrial waste Conservation of water	<ul> <li>Examine various samples of water from different sources.</li> <li>Learn about methods of water purification.</li> <li>Appreciate conservation of water.</li> <li>Promote psychomotor, imaginative, creative artistic and curiosity skills</li> </ul>	<ul> <li>Photography- click photograph showing waste water management/ need or method to control water pollution. Give suitable and catchy caption to your clicked photograph.</li> <li>Activity to show loading/ filtration as a method of purification.</li> <li>Nukkad Natak/ street play/ skit on 'JAL HI JEEWAN HAI'(HC)</li> </ul>	Assignment 23: Page No366 Question-D (2, 3, 4, 5)  Assignment 24: Page No366,367 Question- E( 1, 3, 4)
	CHAPTER-9: CROP PRODUCTION AND ITS MANAGEMENT  (Internal Assessment)  • Food from plants • Agricultural practices	<ul> <li>Learners will be able to-</li> <li>Learn various agricultural practices.</li> <li>Classify the crops as Rabi and Kharif crops.</li> </ul>	<ul> <li>Compose a song/ poem to promote organic farming.</li> <li>Prepare different agricultural implements using clay/dough/shilpkar.</li> </ul>	Assignment 25: Page No185 Question-D( 3, 4, 5)

OCTOBER	<ul> <li>Preparation of soil</li> <li>Sowing</li> <li>Soil replenishment</li> <li>Irrigation</li> <li>Traditional system of irrigation</li> <li>Modern system of irrigation</li> <li>Crop protection</li> <li>Harvesting</li> <li>Storage</li> <li>Crop improvement</li> </ul>	<ul> <li>Analyse the methods of cropimprovement</li> <li>Investigate realworld problems and finding creative ways to solve them and advance into information literacy.</li> <li>Establish critical thinking and creative skills.</li> </ul>	❖ Make a poster on any one given harvest festival of India: -Baisakhi, Gudi Padwa, Onam, Pongal	Assignment 26: Page no 185,186 Question- E( 1, 4, 5)
	CHAPTER-3: METALS AND NON-METALS  Classification of elements Occurrence of elements Minerals and ores Physical properties of metal and non-metals Chemical properties Reactivity of metals Displacement reactions Noble metals	<ul> <li>Classify elements into metals and nonmetals.</li> <li>Compare and contrast metals and non-metals.</li> <li>Appreciate the importance of various metals, non-metals and alloys.</li> <li>Develop effective oral and written communication skills</li> <li>Analyse information, Curiosity and imagination</li> </ul>	<ul> <li>Demonstration of activities to show physical properties and chemical properties of metals and non-metals.</li> <li>Paste the pictures of the materials to show the uses of metals/ non-metals and alloys in daily life.</li> <li>Design a piece jewellery by using aluminium foil</li> </ul>	Assignment 27: Page no 54 Question-D( 1,2,3,4)  Assignment 28: Page No 54 Question – E(2,3,4)

OCTOBER	Uses of metals and non-metals			
	<ul> <li>CHAPTER-12: SOUND</li> <li>Sound and vibrations</li> <li>Sound produced by humans</li> <li>Sound produced by animals</li> <li>Propagation of sound</li> <li>Amplitude, time period and frequency of a vibration</li> <li>Loudness and pitch of a sound</li> <li>Audible and inaudible sound</li> <li>Noise and music</li> <li>Noise pollution: sources, effect and measure to limit noise pollution</li> <li>Hearing impairment</li> </ul>	<ul> <li>Learners will be able to-</li> <li>Learn mechanism of production of sound by humans and various animals.</li> <li>Analyse causes and effects of noise pollution.</li> <li>Differentiate between noise and music.</li> <li>Collaborate, self-inquiry, concept mapping.</li> <li>Arrive at Real life task-based learning</li> <li>Evolve psychomotor skills and problem solving.</li> </ul>	<ul> <li>Prepare an e-poster to create awareness about the harmful effects of 'Noise Pollution'.</li> <li>Demonstration of activities to show dependence of:         <ul> <li>loudness on amplitude</li> <li>Pitch on frequency</li> <li>Pitch on length of vibrating object</li> </ul> </li> <li>Create your own music instruments and compose a music keeping in mind 'loudness and pitch'.</li> </ul>	Assignment 29: Page No236 Question-D (1, 2, 3, 4)  Assignment 30: Page No 237 Question- E(1, 2, 4,5)
	CHAPTER-10: REFRACTION AND DISPERSION OF LIGHT	<ul><li>Learners will be able to-</li><li>Understand the concept of</li></ul>	<ul> <li>Demonstration of activities to show:</li> <li>Application of refraction of light</li> </ul>	Assignment 31: Page No193 Question – D(1,2,4,5)

NOVEMBER  No. of Working Days-22	<ul> <li>Refraction of light:         cause</li> <li>Refractive index and         optical density</li> <li>Rules for refraction</li> <li>Refraction of light by         a glass slab</li> <li>Dispersion of white         light by a glass prism</li> <li>Rainbow formation</li> <li>Spherical lenses and         basic terms related to         lenses</li> <li>Image formation by         convex and concave         lenses</li> </ul>	refraction and its cause.  • Analyse the practical uses of lenses.  • Appreciate the phenomena of dispersion in nature.  • Develop Psychomotor skills, Creative thinking ability, Capacity for working in team, Organisational	<ul> <li>Refraction through a rectangular glass slab</li> <li>dispersion of white light through a glass prism</li> <li>Draw the following ray diagrams to show:         <ul> <li>formation of image by a convex lens when object is placed at different positions.</li> <li>Refraction through a glass slab and dispersion of white light through a glass prism.</li> </ul> </li> </ul>	Assignment 32: Page No194 Question – E(3, 4, 5a,6b)
NOVEMBER	Application of lenses	skills	<ul> <li>Formation of image by a concave lens when object is at infinity, at 2F and between F and O.</li> <li>Bent appearance of a pencil dipped in water, raised appearance of a coin, shallow appearance of a swimming pool.</li> <li>Draw a diagrams to show image formation by a</li> </ul>	

convex

lens/concave lens

CHAPTER-11: THUMAN EYE   • Structure eye and fit • Blind spo • Rods and cells • Working eye • Range of • Power of accommo • Defects of • Care of ey • Optical an optical aid • Braille sys	Learners will be able to-  of human nctions  cone shaped  of human  of human	<ul> <li>Make a colourful neat diagram to show parts of Human Eye.</li> <li>Design a toy/flipbook to show motion pictures based on 'Persistence of Vision'.</li> <li>Survey in your neighbourhood on 'Defects of Vision.</li> </ul>	Assignment 33: Page No212 Question – D( 4, 5, 6,8)  Assignment 34 Page No213 Question – E( 2, 3, 5)

DECEMBER  No. of Working Days-22	CHAPTER-14: REPRODUCTION IN ANIMALS	<ul> <li>Learners will be able to-</li> <li>Learn the various methods of reproduction in different animals.</li> <li>Compare male and female reproductive system.</li> <li>Classify organisms as oviparous and viviparous animals.</li> <li>Understand the changes taking place in animals like frog during metamorphosis.</li> <li>Develop Psychomotor skills, Creative thinking ability, Capacity for working in team and Organisational skills</li> </ul>	<ul> <li>3-D depiction using clay on cardboard of any one of the following:         <ul> <li>mode of asexual reproduction</li> <li>human female reproductive system</li> <li>human male gamete- sperm</li> </ul> </li> </ul>	Assignment 35: Page No265 Question – D (4, 5, 6, 7)  Assignment 36:- Page No265,266 Question – E- 1, 2, 4
	CHAPTER-15: REACHING THE AGE OF ADOLESCENCE   • Adolescence and puberty • Changes at puberty • Sexual development • Reproductive phase in human being	<ul> <li>Learners will be able to-</li> <li>Analyse the problems faced by adolescents.</li> <li>Understand emotional and physiological changes taking place during adolescence.</li> <li>Learn the importance of hormones and their functions.</li> </ul>	❖ Design a cover page of book based on 'Adolescents are Unique'. Designing can be done manually or using any software or app. Give suitable title to book cover.	Assignment 37: Page No280 Question – D (2, 3, 4, 6)  Assignment 38: Page No280,281 Question – E(1, 2, 3,)

DECEMBER	<ul> <li>Determination of sex of a child</li> <li>Endocrine system</li> <li>Role of hormones in completing the life cycle of insects and frogs</li> <li>Reproductive health: nutritional needs, personal hygiene, physical exercise, say no to drugs</li> </ul>	Develop Psychomotor skills, Creative thinking ability, Capacity for working in team and Organisational skills	<ul> <li>Write a slogan on Gender Sensitization.</li> <li>Prepare a poster on 'Say No to Drugs'</li> </ul>	
	CHAPTER-17: STARS AND SOLAR SYSTEM  (Internal Assessment)  • Galaxy: milky way galaxy • Stars and constellations • Moon: phases and surface • Solar system • Sun and planets • Terrestrial and Jovian planets	<ul> <li>Classify the various heavenly bodies.</li> <li>Understand the characteristic features of different heavenly bodies.</li> <li>Appreciate applications of artificial satellites.</li> <li>Develop Psychomotor skills, Creative thinking ability, Capacity for working in team, Organisational skills</li> </ul>	<ul> <li>To make a PPT and learn aids on the topics allotted for the group presentation.</li> <li>Design/ paint a t-shirt to show phases of moon/ celestial bodies/ change of seasons.</li> <li>To show different phases of moon using paper/ Oreo biscuit/disposable glass</li> </ul>	Assignment 39 Page No325 Question – D(1,2,3)  Assignment 40 Page No 326,327 Question – E(3,4,5)

<ul> <li>Minor bodies,         Artificial satellites         and applications     </li> </ul>		