

**HANSRAJ MODEL SCHOOL
PUNJABI BAGH, NEW DELHI
ACADEMIC PLAN
SESSION: 2024-2025
SUBJECT: SCIENCE
CLASS: VI**

FIRST TERM

- 1) **L-1 OUR ENVIRONMENT**
- 2) **L-3 NATURE OF MATTER**
- 3) **L-4 SEPARATION OF SUBSTANCES**
- 4) **L-6 MEASUREMENT AND MOTION**
- 5) **L-7 THE WORLD OF LIVING**
- 6) **L-8 STRUCTURE AND FUNCTION OF LIVING ORGANISMS-PLANTS**
- 7) **L-12 LIGHT AND SHADOW**

SECOND TERM

- 1) **L-2 FOOD**
- 2) **L-5 CHANGES AROUND US**
- 3) **L-9 STRUCTURE AND FUNCTION OF LIVING ORGANISMS-ANIMALS**
- 4) **L-10 WORK AND ENERGY**
- 5) **L-11 ELECTRIC CURRENTS AND CIRCUITS**
- 6) **L-13 MAGNETS**
- 7) **L-14 FABRIC FROM FIBRE**

FIRST TERM

<u>MONTH</u>	<u>TOPIC/SUBTOPIC</u>	<u>LEARNING INTENTIONS</u>	<u>ACTIVITIES</u>	<u>ASSIGNMENT</u>
APRIL (23days)	<u>LESSON -1</u> <u>OUR ENVIRONMENT</u> <ul style="list-style-type: none"> • Biotic and Abiotic components • Autotrophs and Heterotrophs • Decomposers and scavengers • Recycling of minerals (Mineral Cycle) • Soil, Air, temperature, light, Humidity, Water 	After the completion of the chapter, the learners will be able to - <ul style="list-style-type: none"> • Understand and identify biotic and abiotic components of the environment. • Understand and identify biodegradable and non-biodegradable materials • Enumerate the effects of abiotic components on survival of organisms. • Differentiate between: <ul style="list-style-type: none"> *Autotrophs and Heterotrophs *Decomposers and Scavengers. *Primary and Secondary consumers • Develop skills like environmental awareness, use of four R's and social responsibility. 	<ul style="list-style-type: none"> • Twin Bin System. (AI) (SDG 6) • Make a paper bag or paper puppets using old calendar/ newspaper and write down a slogan on it on conservation of environment. (AI)(HC) (SDG 13) • Aerobin system (visit in the school) • Use a paper plate to show the circle of life (food chain) AI/HC • Assignments-A1 and A2 	A-1 (E: 1,2,3 D: 1,2) A-2 (E:4,5,6 D: 5) Case study Q /HOTS A/R

<u>MONTH</u>	<u>TOPIC/SUBTOPIC</u>	<u>LEARNING INTENTIONS</u>	<u>ACTIVITIES</u>	<u>ASSIGNMENT</u>
	<p><u>LESSON -3</u> <u>NATURE OF MATTER</u></p> <ul style="list-style-type: none"> • Constitution of matter • Properties of matter • Classification of matter 	<p>After studying this chapter students will be able to-</p> <ul style="list-style-type: none"> • Realise the importance of classification of materials • Understand classification on the basis of similarities and dissimilarities. • Understand and assimilate various properties of matter like: <ul style="list-style-type: none"> *Transparency *floating/sinking *Diffusion *Dissolution *Solubility • Develop critical thinking and analysis 	<ul style="list-style-type: none"> • Masti With Halwa (Solubility increases with temperature increase). (CR/HC) • To study floating and sinking by using coin, ball, wood, ice, stone, paper boat etc. (HC/CR) • Holy Dot Activity. (HC/AI)) • Experiments-Diffusion and solubility • Assignments-A3 and A4 	<p>A-3 (D:1,3,4,5 E: 3)</p> <p>A-4 (E-4,5)</p> <p>Case study Q / HOTS A/R</p>

MAY (17days)	<u>L-7 THE WORLD OF LIVING</u> <ul style="list-style-type: none"> • Characteristics of living things • Classification of plants • Classification of animals • Importance of plants and animals 	<p>After studying this chapter students will be able to-</p> <ul style="list-style-type: none"> • Understand living and non - living things • Learn the characteristics of a living thing • Understand classification of plants and animals • Appreciate the importance of plants and animals • Develop observational and aesthetics skill 	<ul style="list-style-type: none"> • Pocket Dictionary (AI/HC) • Watch Them Grow (Seed Germination)SDG4 • Nature walk (SDG15) • Project work-Me and my diversity(AI/HC) • Assignment- A5 and A6 	<p>A-5(D: 1 E: 1,3,4,5)</p> <p>A-6 (D:4 E :6,7)</p> <p>Case study Q / HOTS A/R</p>
JULY (25days)	<u>L-4 SEPARATION OF SUBSTANCES</u> <ul style="list-style-type: none"> • Pure substances and mixtures • Types of mixtures • Separating the components of mixture • Combining two or more methods of separation 	<p>After studying this chapter students will be able to-</p> <ul style="list-style-type: none"> • Understand the concept of pure substance and Mixture and need for separation of substances. • Differentiate between homogeneous and heterogeneous mixtures • Classify Mixtures and separate: <ul style="list-style-type: none"> ➤ solid –solid mixture ➤ solid- liquid mixture ➤ liquid-liquid mixture • Understand combined methods of separation • Arrive at experimental results, comparison, and research. 	<ul style="list-style-type: none"> • To make a winnow basket using coloured pastel sheets. (AI/HC) • Mind Mapping (Foldable Craft) • Assignments –A7 and A8 	<p>A-7 (D:2,4,5 E:1,2,7)</p> <p>Page No. 69 (Q 1)</p> <p>A-8 (E: 3,4,5,6,8)</p> <p>Page No. 69 (Q 3)</p> <p>Case study Q / HOTS A/R</p>

		<ul style="list-style-type: none">• Arrive at Real life task-based learning, evolve psychomotor skills and problem solving. <p>*Establish critical and creative skill</p>		
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<u>MONTH</u>	<u>TOPIC /LESSON</u>	<u>LEARNING INTENTIONS</u>	<u>ACTIVITIES</u>	<u>ASSIGNMENT</u>
JULY	<u>LESSON -6</u> <u>MEASUREMENT</u> <u>AND MOTION</u> <ul style="list-style-type: none"> • Direct measurement of length • Three basic physical quantities and their SI Units • Time • Rest and motion • Types of motion • Force and its effects 	After studying this chapter students will be able to - <ul style="list-style-type: none"> • Understand Measurement and its importance • Realise the importance of need to have standard unit of measurement. • Describe about measurement of length by using a scale and length of a curved line. • Explain Concept of rest and motion. • Differentiate between different types of motion • Explain Force and its effects. • Investigate real-world problems and finding creative ways to solve them and advance into information literacy. 	<ul style="list-style-type: none"> • Measure the length of a curved line with the help of a coloured thread/wool and Scale. (HOA/CR) • Little Hands at work (Model making on different types of motion. (AI/HC) (SDG 5) • Sports Event- Races using stopwatch. (HC) • Science log sheet • Find out information about scientist who gave (Three Laws of Motion)- (Extended Learning). (SDG 4) Assignments –A9 and A10	A-9 (D:2 E:1,2,3) A-10 (D:5 E: 4,5,6) Case study Q / HOTS A/R
AUGUST (23days)	<u>LESSON-8</u> <u>STRUCTURE AND</u> <u>FUNCTION OF</u> <u>LIVING</u> <u>ORGANISMS-</u> <u>PLANTS</u> <ul style="list-style-type: none"> • Root system and its classification • Modifications of the root • Shoot system 	After studying this chapter students will be able to - <ul style="list-style-type: none"> • Understand the structure of flowering plants. • State the functions of the root, stem and leaves and their modifications. • Understand the structure of a flower and its functions. • State the functions of seed and fruit. • Develop observational and aesthetics skills and drawing skills 	<ul style="list-style-type: none"> • Playing With Clay or Shilpakar (Making structure of tap root and fibrous root by using clay or shilpkar). (AI/CR) • Paper Art (Carnivorous Plant). (HC) • Assignments-A11 and A12 	A-11 (D:1 E:1,2,3,4,6) A-12 (D:6 E: 5) Page No.139 (Q 2) Case study Q / HOTS A/R

	<ul style="list-style-type: none"> • Modifications of the stem • Structure of a leaf • Modifications of a leaf • Structure of a flower • Seeds and fruit 			
	<p><u>L-12</u> <u>LIGHT AND SHADOW</u></p> <ul style="list-style-type: none"> • Light and different types of objects • Shadow and its characteristics • Solar and lunar eclipse • Pin hole camera • Reflection of light • Regular and irregular reflection • Image formed by a plane mirror 	<p>After studying this chapter students will be able to-</p> <ul style="list-style-type: none"> • Understand the concept of light being a form of energy. • Understand the formation of shadow and its characteristics • Understand the rectilinear propagation of light. • Understand the formation of image using a plane mirror and properties of image. • Develop investigatory skills, critical thinking and creative skills 	<ul style="list-style-type: none"> • The Joy of Sharing (Solar/Lunar Eclipse Craft). (CR/HC) • Make a pinhole camera. (AI/HC) • Assignments-A13 and A14 	<p>A-13 (D: 3,4) Extra questions related to shadow</p> <p>A-14 (E: 1,2,3,4,5) Case study Q / HOTS A/R</p>

***SEPTEMBER (23 days) : Revision for half yearly exam**

<u>MONTH</u>	<u>TOPIC /LESSON</u>	<u>LEARNING INTENTIONS</u>	<u>ACTIVITIES</u>	<u>ASSIGNMENT</u>
OCTOBER (20 days)	<u>LESSON -2</u> <u>FOOD</u> <ul style="list-style-type: none"> • Sources of food • Food and its components • Mineral deficiencies • Vitamin deficiencies • Balanced diet • Malnutrition and obesity 	After studying this chapter students will be able to - <ul style="list-style-type: none"> • Identify various plants and animals' sources of food • Understand functions of carbohydrates, fats, proteins, vitamins and minerals. • Explain importance of roughage and water in our diet • Discuss causes and symptoms of various deficiency diseases • Discuss causes and prevention of obesity • Explain importance of balanced diet • Arrive at experimental results, comparison, and research. 	<ul style="list-style-type: none"> • To test the presence of proteins, sugar, starch, and fats in various food samples. (CR) • Eat Well Plate (Balanced diet)(SDG 3). (CI/HC) • Assignment – A1 and A2 	A-1 (D: 1,2,5 E: 3,6) A-2 (E:2,4,5) Extra questions related to Malnutrition. Case study Q / HOTS A/R
	<u>L-5</u> <u>CHANGES</u> <u>AROUND US</u> <ul style="list-style-type: none"> • Slow and fast changes • Reversible and irreversible changes • Physical and chemical changes • Changes involve energy 	After studying this chapter students will be able to - <ul style="list-style-type: none"> • Understand the concept of change. • Understand various types of changes and differentiate between: <ul style="list-style-type: none"> -Slow and fast changes -Reversible and irreversible changes -Physical and chemical changes • Develop observational skills and logical reasoning skills • Appreciate the idea that there is science behind everyday experiences. 	<ul style="list-style-type: none"> • Formation of curd /cheese (HC/CR) • Dough Making/ Blowing of Balloon/ Making of Aeroplane or Boat using Paper. (HC/CR) • Assignments-A3 and A4 	A-3 (D: 1,2,3,4,5) A-4 (E:1,2,3,4) Case study Q / HOTS A/R

<u>Month</u>	<u>Topic/Lesson</u>	<u>Learning intentions</u>	<u>Activities</u>	<u>ASSIGNMENT</u>
NOVEMBER (22days)	<u>L-9</u> <u>STRUCTURE AND FUNCTION OF LIVING ORGANISMS-ANIMALS</u> <ul style="list-style-type: none"> Levels of an organism Digestive system Respiratory system Circulatory system Nervous System Excretory system Skeletal system Reproductive system 	After studying this chapter students will be able to- <ul style="list-style-type: none"> Understand various systems of the body namely: <ul style="list-style-type: none"> Digestive system Respiratory system Circulatory system Excretory system Skeleton system Reproductive system Understand the working of various parts of every system. Develop observational and aesthetics skills and drawing skills 	<ul style="list-style-type: none"> Robotic Hand (Skeleton system)AI/HC Working Model – Respiratory system AI/HC Working Model - Excretory system AI/HC Assignments -A5 and A6 	A-5 (E:1,2,3) Extra questions A-6 (E: 4,5,6) Case study Q / HOTS A/R
	<u>L-11</u> <u>ELECTRIC CURRENT AND CIRCUITS</u> <ul style="list-style-type: none"> Electric torch Electric cell Electric bulb Electric current Electric circuit Electric switch Use of symbols in electric circuits Conductor and insulators 	After studying this chapter students will be able to- <ul style="list-style-type: none"> *Explain construction and working of- an electric torch, cell, and bulb. Understand an electric circuit and switch Identify symbols of some electric circuit components. Understand importance of conductors and insulators. Apply, adapt and innovate to the things available to them 	<ul style="list-style-type: none"> To make a Paper Lantern (simple circuit .)(AI/CR) Creativity at its Best (Making of Torch using waste Materials.) (CR/HC) Assignments -A7 and A8 	A-7 (D: 1,2,3,4,5,6) A-8 (E: 1,2,5) Extra Questions Case study Q / HOTS A/R

<u>Month</u>	<u>Topic/Lesson</u>	<u>Learning intentions</u>	<u>Activities</u>	<u>Assignment</u>
DECEMBER (22days)	<u>L-10</u> <u>WORK AND ENERGY</u> <ul style="list-style-type: none"> • Factors affecting the work done • Forms of energy 	After studying this chapter students will be able to - <ul style="list-style-type: none"> • Understand the concept of Work and its relation to Energy. • Understand the factors on which work done depends. • Understand various types of energy and their uses in our day-to-day life. • Make real-world applications • Approach problems in creative ways • Develop investigatory skills • Appreciate the idea that there is science behind everyday experience 	<ul style="list-style-type: none"> • Make a Rubber Band Toy car motion to show how one energy transforms to another form. (AI/CR) • Paper Roller Coaster Activity • Assignments-A9 and A10 	A-9 (D: 1,2,5 E: 1,2) A-10 (E: 3,4) Extra questions Case study Q / HOTS A/R
	<u>L-13 MAGNETS</u> <ul style="list-style-type: none"> • Natural and artificial magnets • Permanent and temporary magnets • Magnetic and non-magnetic materials • Strength of a magnet • Interaction between bar magnets • Properties of a bar magnet • Earth as a magnet 	After studying this chapter students will be able to- <ul style="list-style-type: none"> • Differentiate between- natural and man-made magnets. • -Permanent and Temporary magnets • Understand magnetic and non-magnetic materials. • Discuss properties of a bar magnet. • Apply, adapt and innovate to the things available to them. 	<ul style="list-style-type: none"> • Make an Electromagnet by using iron nail, copper wire and battery. (CR/HC) • Make a magnetic Board Game . (AI/HC) • Assignments -A11 and A12 	A-11 (D: 1,2,3,4,5) A-12 (E: 1,2,3,4,5) Case study Q/ HOTS A/R

	<ul style="list-style-type: none"> • Making a magnet • Magnetic compass 	<ul style="list-style-type: none"> • Arrive at experimental results, comparison, and • research. 		
<u>Month</u>	<u>Topic/Lesson</u>	<u>Learning intentions</u>	<u>• Activities</u>	<u>Assignment</u>
JANUARY (19 days)	<u>LESSON -14</u> <u>FABRIC FROM FIBRE</u> <u>Natural fibres synthetic fibres</u> <u>Production of cloth</u>	After studying this chapter students will be able to- <ul style="list-style-type: none"> • Identify various types of fabrics. • Differentiate between various plants and animal fibres. • Discuss various steps involved in production of cloth • Promote psychomotor, imaginative, creative artistic and curiosity skills 	<ul style="list-style-type: none"> • Project work- Technology connected to your clothing (Production of cloth) (AI/CR) • Batik /Tie -dye /Stencil printing (AI/HC) • Assignment-A13 and A14 	A-13 (E:1,2,3,4,5) A-14 Extra Questions Case study Q / HOTS A/R

- **FEBRUARY (22days) : Revision for final exam**

Note- Key to the abbreviations used for activities

- CR - Content related
- AI - Art integration
- HC - Happiness Curriculum
- DC - Deshbhakti Curriculum