

Espalier: The Heritage School											
Annual Planner-2023-24											
Subject: Science											
Sr No	Lesson Name	Learning objectives/ Subtopic	Methodology	Pedagogical methods	Learning outcomes	Teaching Aids	Teaching Place	Reff.books with pg.no.	No.of lectures required	Class Activities /Diagrams / Map work	Activity Suggested
1	Living together	1) To appreciate variety of life. 2) To understand interdependence 3)To learn about pollination	1) Heuristic Method 2)Lecture cum demonstration 3) Inquiry based 4)Technology based	collect information from pictures / elders/ books/ newspapers/ magazines/web resources / museums etc. about animals which have very sharp sense of hearing, smell and vision, different landforms such as plain area, hilly area, deserts, etc. and the varieties of flora-fauna, lives of people in such places	describes the interdependence among animals, plants and humans. (e.g., communities earning livelihood from animals, dispersal of seeds etc.)	1)A plot of land and all living things present in it. 2)Pictures of different animals 3) A flower 4) Different kinds of seeds. 5) Videos	Classrom	1) Small science - Text book 2) small science - work book 3) Small science - teacher's hand book.		1) Draw map of plot 2) Role play for food chain and food web. 3)Draw food chain 4) Make food web. 5)observe parts of flower. 6) Complete diagram. 7) Picture reading.	Collect different types of seeds to understand the way it disperses, dissect two different types of flower to understand the part of flower.
2	Soil	1) To understand that plants need minerals. 2) To learn about ground water, water cycle and water conservation. 3)To learn about soil erosion.	1) Heuristic Method 2)Lecture cum demonstration 3) Inquiry based 4)Technology based	observe, explore surroundings and critically think how seeds reach from one place to another, how the plants and trees grow at places where no one plants them e.g., forests, who waters them and who owns them *collect information from pictures / elders/ books/ newspapers/ magazines/web resources / museums etc. about animals which have very sharp sense of hearing, smell and vision, different landforms such as plain area, hilly area, deserts, etc. and the varieties of flora-fauna, lives of people in such places	applies learning of scientific concepts in day-to-day life, e.g., dealing with acidity; testing and treating soil; taking measures to prevent corrosion; cultivation by vegetative propagation; connecting two or more electric cells in proper order in devices; taking measures during and after disasters; suggesting methods for treatment of polluted water for reuse, etc	1)A plot of land with tree or grass. 2)Pictures of soil insects 3) Fresh and dry leaves. 4) Sand ,clay and loamy soil. 5) water. 6) A dropper. 7) Strainer 8)Plastic bottle and plastic bag 9) Videos	Classrom	1) Small science - Text book 2) small science - work book 3) Small science - teacher's hand book.	5	1)Story reading. 2) Draw soil organisms. 3)Practical for soil analysis 4) Demonstration to show how rain water goes in wells. 5) Complete diagram. 6) Picture reading.	Make a pot or a small statue with clay soil

3	How Things Move	1) To notice how things move and build vocabulary for accurate description of motion.2) To develop concept of speed .3) To understand friction.	1) Lecture cum demonstration 2) Innovative Method 3) Inquiry based 4)Technology based	share experiences and discuss about the information collected or places visited with peers, teachers and elders *observe and explore the immediate surroundings, i.e., home, school and neighborhood for different objects/flowers/ plants/animals/birds for their simple observable physical features explore the neighbourhood	guesses (properties, conditions of phenomena), estimates spatial quantities (distance, weight, time, duration) in standard/local units	1)Moving things like ball, top, ring, spring, car, fan, pendulum etc . 2)Human skeleton 3) Running Track 4) Meter tape. 5) Stop watch 6)Plastic , wooden and metal scales.	Classroom	1) Small science - Text book 2) small science - work book 3) Small science - teacher's hand book.	5	1)Making groups of objects exhibiting similar movements. 2) Demonstration of movement of ball and socket joint. 3)Identification of different joints present in our body 4) Activity to understand friction 5) Activity - Make things move. 6) Picture reading. 7) Complete the picture	Organise a race amongst your friends and find the speed of each person
4	Making a cart	1) To notice how things move and build vocabulary for accurate description of motion.2) To develop concept of speed .3) To understand friction.	1) Lecture cum demonstration 2) Innovative Method 3) Inquiry based 4)Technology based	for the means of transport, communication and what works people do *participate actively and undertake initiatives of care, share empathy, leadership by working together in groups, e.g., in different indoor/outdoor/local/ contemporary activities and games, carry	differentiates between objects and activities of past and present. (e.g., transport,)	1)Hands on science kit for making a cart 2)Glue 3) scissors. 4) metal can. 5) Cardboard 4) Plastic bottle 5) Bottle cap 6) Videos	Classroom	1) Small science - Text book 2) small science - work book 3) Small science - teacher's hand book.	5	1)Making a cart. 2)Find circumference without using radius. 3) Draw carts.	Make different kinds of carts (balloon powered, cell powered, pull and push)
5	Our earth	1) To develop in children the concept of round earth. 2) To understand concept of right and left 3) To understand directions.	1) Lecture cum demonstration 2) Heuristic Method 3) Inquiry based 4)Technology based	pictures / elders/ books/ newspapers/ magazines/web resources / museums etc. about animals which have very sharp sense of hearing, smell and vision, different landforms such as plain area, hilly area, deserts, etc. and the varieties of flora-fauna, lives of people in such places	movement of earth, identifies signs, directions, location of different objects/landmarks of a locality / place visited in maps and predicts directions in context of positions at different places for a location	1)Photographs of earth 2)Globe 3) Doll. 4)World map.	Classroom	1) Small science - Text book 2) small science - work book 3) Small science - teacher's hand book.	5	1)Draw tree and compare the drawing with actual 2)Find continents and oceans on 3) Make globe. 4) Picture reading. 5) Ask and find out. 6) Act it out. 7) Place doll at different positions on globe 8) Draw skies for different people in different continents.	Make a list of places you wish to visit from each continent. Find its latitude and longitude

6	Day and night	1) To understand rotation and revolution of the earth 2) To understand day and night formation 3) To observe moon and stars .	1) Lecture cum demonstration 2) Heuristic Method 3) Inquiry based 4) Technology based	observe stars, planets, satellite (Moon), eclipse under the guidance of parents/ teacher/elders, etc. to understand astronomical phenomena. *use diagrams, models and audio-visual materials to understand motions of the earth	use diagrams, models and audio-visual materials to understand motions of the earth. *Day and night, rotation and revolution	1) Photographs of earth 2) Globe 3) Candle. 4) World map. 5) Torch 6) Videos	Classroom	1) Small science - Text book 2) small science - work book 3) Small science - teacher's hand book.	5	1) Role play 2) Demonstration to show how day and night occur. 3) Watching moon 4) Watching constellations.	Make your own constellation using torch
7	Earth's neighbors.	1) To introduce children to other planets around the sun. 2) To introduce them to other members of solar system, including moon.	1) Lecture cum demonstration 2) Heuristic Method 3) Inquiry based 4) Technology based	observe stars, planets, satellite (Moon), eclipse under the guidance of parents/ teacher/elders, etc. to understand astronomical phenomena. *use diagrams, models and audio-visual materials to understand motions of the earth	distinguishes between stars, planets and satellites e.g., Sun, Earth and Moon, Solar system and other celestial bodies	1) Photographs of earth 2) Globe 3) Candle. 4) World map. 5) Videos	Classroom	1) Small science - Text book 2) small science - work book 3) Small science - teacher's hand book.	5	1) Role play 2) Practical to show how craters are formed. 3) Drawing orbits of planets. 4) Making model of planets of our solar system.	Make a model of Solar system using Clay or Role play
8	What is in our bodies	1) To introduce cell as basic unit of living things. 2) To make children understand circulatory system. 3) To make them understand respiratory system.	1) Lecture cum demonstration 2) Technology based 3) Laboratory based	explore and read pictures, posters, signboards, books, audio-videos, tactile/raised material/ newspaper clippings, stories/poems, web resources, documentaries, library and use other resources besides textbook.	draws labelled diagrams/ flow charts e.g., organ systems in human and plants; differentiates materials and organisms such as, circulation in different organisms;	1) Child's own palm 2) stethoscope (made during hands on science activity) 3) measuring tape 4) plastic bottle 3) red colour. 4) model of heart 5) Chart of circulatory system 6) Chart of respiratory	Classroom	1) Small science - Text book 2) small science - work book 3) Small science - teacher's hand book.	66	1) observing veins present in palm 2) Finding heart rate . 3) Measuring chest while breathing in and out. 4) Demonstration of working of heart using bottle and red colour. 5) Role play. 6) Writing a poem on heart.	Make a model of Heart using clay soil (shadu matti)
9	Staying healthy	1) To make children learn about proper nutrition . 2) To make children understand about communicable diseases. 3) To develop healthy habits in children.	1) Lecture cum demonstration 2) Technology based 3) Laboratory based	explore surroundings, natural processes, phenomena using senses viz. seeing, touching, tasting, smelling, hearing	identifies on the basis of observable features, i.e., appearance, texture, function, aroma, etc *relates processes and phenomenon with causes, e.g., deficiency diseases with diet;	1) Picture of various food items. 2) Nutritional value chart. 3) Pictures of some pathogens. 4) Videos	Classroom	1) Small science - Text book 2) small science - work book 3) Small science - teacher's hand book.	5	1) observing the chart and answer the questions 2) Activity to understand how to select dishes to make balanced diet. 3) Picture reading. 4) Figure it out.	Make a model of food pyramid using waste material

10	The things we use	1)To draw children's attention to different materials and their properties .2) To make children understand about biodegradable and non degradable material. 3) To make them realize about various environmental issues.	1) Lecture cum demonstration 2) Technology based 3) Heuristic based	observe and share experiences for different phenomena such as how water evaporates, condenses, and dissolves different substances under different conditions *conduct activities and simple experiments to check the properties/ features of different objects/ seeds/ water/waste materials, etc	groups objects, materials, activities for features and properties such as– shape, taste, colour, texture, sound, traits etc. *suggests ways for hygiene, health, managing waste, disaster/emergency situations and protecting/saving resources (land, fuels, forests, etc.) and shows sensitivity for the disadvantaged/deprived.	1)Different things like pen, scissor or umbrella etc. 2) Banana leaf. 3)A bicycle	Classrom	1) Small science - Text book 2) small science - work book 3) Small science - teacher's hand book.	5	1)Observe the things and write the material used to make it. 2)Activity to understand properties of different materials. 3)Picture story. 4) Dissection of bicycle.	Device a way to segregate biodegradable and non-biodegradable waste. Make a paper bag and find ways to recycle to paper waste.
----	--------------------------	---	---	---	---	---	----------	---	---	---	--