## CHOITHRAM SCHOOL, MANIK BAGH, INDORE

## ANNUAL CURRICULUM PLAN SESSION 2020 – 2021

CLASS: VI

**SUBJECT: SCIENCE** 

Month &	Theme/ Sub-	Learning	Objectives	Activities & Resources	<b>Expected Learning Outcomes</b>	Assessment
Working	theme	Subject Specific	Behavioral			
Days		(Content Based)	(Application based)			
	Food and	1. To understand	1. Learner will	Practical work in groups (to test the		
<b>June(17)</b>	Nutrition	the importance	appreciate the	food items brought by the learners)	• Students will understand	The chapter will be
	1. Food, from	of food	importance of	Students will test the presence of	the importance of food	assessed through Subject
	where does it	2. to identify the	each and every	components(starch ,proteins, fats,	as the basic necessity.	Enrichment Activity –
	come from?	basic	member in his /	sugars) of food from the given	• Learners will appreciate	which include component
	(3 periods)	components in	her surroundings.	sample and note the observations	the resources that feed	testing as an individual
		different food	2. Learner will learn	1	the world and sensitised	assesement.
		items and its	to empathise and	food item, cooked and soft food	be to take care of the	Rubrics: Experiment,
		sources/identifi	to inculcate the	sample must be taken. To it little	available resources of	record, viva
		cation of edible	habit of respecting		food	
		parts of plant	others.	then 1-2 drops of iodine solution is	• Students will understand	
		3. To identify the	3. Learner will be	added. Blackish-blue coloration	that balanced diet is	
		food habits of	able to accept that		necessary for good	
		different	for the survival	,	health and will analyse	
	2.Components	animals and	collaboration is	, 1	the associated diseases.	
	of food	classify	essential.	,banana ,milk ,etc	• Students will have	
	(7 periods)	4. Appreciate the		To test the presence of proteins,	evidence based	
		importance of		small quantity of food item must be	observation and	
		balanced diet		mashed and little amount of water	identification of	
		5. To analyse the		must be added and shake well. To	components in	
		cause of		this, using a dropper,10 drops of	representative food item	
		different		solution of caustic soda and 1-2	They will be able to handle the	
		deficiency		drops of solution of copper sulphate	chemicals and apparatus	
		diseases		must be added. Purple coloration	precisely.	
		6. To apply the		indicates the presence of proteins.		

		learning to		Importance of Cooking.		
		determine the		Students willlist out the food items		
		combination of		that are consumed raw and that are		
		foods to be		cooked		
		consumed				
		To know the				
		importance of cooking				
June	<b>3.</b> sorting	To enable the students	The learners will:	Activity1	The students learnt:	The student will be given
	materials into	to	9. Apply grouping	The teacher will begin with the play	1. Objects are made up of	different objects such as a
	groups	4. Know that	while storing or	way method. For this, different	different materials.	lump of salt, green grass,
	(7 periods)	objects are	placing things.	objects will be placed in a large	2. To appreciate the	broken glass piece, a small
		made up of	E.g. arrangement	carton like balls(plastic or leather),	necessity of grouping	thermocol box, pen iron nail,
		different	of similar things in	playing cubes of different color	things in everyday life.	naphthalene ball, apiece of
		materials.	kitchen or books	made up of plastic, ruler(plastic or	3. To classify the materials	sugar candy(mishri) and
		5. Understand	in library.	wooden or metallic),pencils(wooden	as lustrous/ non lustrous,	tried to group them on the
		that the choice	10. Learn the	or plastic body) and the students will	hard /soft, soluble/insoluble,	basis of properties given in
		of a material to	importance of	be asked to separate these objects on	capable of floating or	the form of a table. They
		make an object	keeping and doing	the	sinking in water.	will be assessed under
		depends on its	things in an	Basis of following points;	4. To apply grouping while	following heads.
		properties	ordered way.	Shape, color and material	storing or placing things e.g.	
		6. Classify the	11. Appreciate the	here they will be explained that	Arrangement of similar things	Observation, identification
		materials as	necessity of	separation of different objects on	in kitchen or books in library.	of materials.
		lustrous/ non	grouping things in	the basis of their different properties	5. To differentiate between	
		lustrous, hard	everyday life.	is referred as sorting of materials.	transparent, opaque and	
		/soft,	12. Interpret the		translucent objects.	
		soluble/insolub	reason for the	Activity 2:	6. To divide materials into	
		le, capable of	preference of a	A classroom activity will be	groups and learn the importance	
		floating or	particular material	performed with the help of some of	of grouping of <b>materials.</b>	
		sinking in	over others	the stationary items carried by		
		water. 7. Differentiate		students everyday like sharpener,		
				ruler, pencil, eraser, pencil box,		
		between		compass, loose papers, divider,		
		transparent,		stapler pins, paper pins and a pair of scissors these materials would be		
		opaque and				
		translucent		asked to sort on the basis of their		

		objects. 8. To divide materials into groups and learn the importance of grouping of materials.		appearance that is Lustrous or non lustrous.  Activity 3: An activity based on the determination of hardness of material will be demonstrated by the teacher with the help of metal key, a piece of wood or metal, cotton and sponge.  Activity 4: Lab activity- solubility test will be applied by the students under teacher's supervision with the following materials- salt, sugar, sand, and saw dust and chalk powder In water.  Activity 5: The student will be asked to look at	
				fluorescent tube in class through the given material( gelatin sheet, cardboard and tracing paper.	
<b>July(26)</b>	separation of	To enable the students	The learners will:	The students learnt:	1. Activity /
	substances	to	1. Be able to reason	1. The need and purpose of	Assignment (to
	(10 periods)	1. Know the need	the use of different	separation.	assess learning). You
		and purpose of separation.	techniques of separation in	2. The methods of separation that they come across in everyday	are provided with a mixture of salt, sand,
		2. Understand	everyday life like-	life such as handpicking, sieving,	oil and water. Write
		particles of	separation of	etc.	the steps involved for
		different sizes.	cream from milk,	3. To suggest and select the	the separation of salt,
		3. Make them	tea leaves from	suitable separation method for	sand and oil from the
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aware of methods of separation they come across in everyday life such as handpicking sieving, etc.  4. Apply methor for the separation of solids from liquids such sedimentation decantation and filtration. Also liquids from liquids like kerosend in water.  5. Identify conditions where more than one method of separation needs to be applied.  6. Experiment that water dissolves different substances in different.	<ul> <li>2. Suggest and select the suitable separation method for any mixture.</li> <li>3. Comprehend the large scale application of technique such as filtration for purifying water and cottage cheese</li> </ul>	any mixture. 4. The value of extracting and recovering useful things from the non-useful mixture.  5. Apply methods for the separation of solids from liquids such as sedimentation, decantation and filtration. Also liquids from liquids like kerosene in water.  6. To comprehend the large scale application of technique such as filtration for purifying water and cottage cheese preparation.  7. To illustrate the use of alum (phitkari) in cleaning muddy water.  8. The value of extracting and recovering useful things from the non-useful mixture.		mixture by giving an activity along with the diagram. This will apply various separation techniques by the students. It will be assessed under following heads:  1. Selection of appropriate techniques 2. Team work 3. concept
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		amount.				
July	Electricity and circuits (10 periods)	. To enable the students to  1. Be aware of the uses and purposes of electricity.  2. Understand the structure of an electric cell, electric bulb.  3. Comprehend the concept of an electric circuit  4. Investigate the reason of an electric fuse.  5. Assemble an electric circuit with an electric cell, bulb, connecting wires and switch  6. Explore circuit with the switch in on and off position.  Learn precautions and	The learners will:  1. Understand how devices like alarm clocks, wrist watches, and cameras work without electricity that is by using chemical cell.  2. Interpret the meaning of the danger sign displayed on electric poles.  3. Take precaution in handling electric devices.  4. Predict the effect of joining two wires directly.  5. Be able to make a homemade torch.  6. Imbibe the value of safety, precaution and careful handling of electric equipments.	Activity 1 An old discarded electric cell is cut open and shown to the students. They will be explained about various components of electric cell. This will be explained through diagram also.  Activity 2 Students will be asked to bring a simple torch bulb from home with prior intimation. The parts of the electric bulb such as metal casing will be explained to them. This will also be clarified through diagram.  Activity 3 Students will be asked to bring the circuit material such as electric bulb, wires, and bulb. Then the concept of electric circuit will be introduced followed by making of circuit.  Activity 4 The circuit which was made inactivity 3 now will be reconstructed by using safety pins.	The students:  1. Learnt the uses and purposes of electricity.  2. Understood the structure of an electric cell, electric bulb.  3. Assembled an electric circuit with an electric cell, bulb, connecting wires and switch.  4. Learnt precautions and safety measures to be followed while handling electricity.  Imbibe the value of safety, precaution and careful handling of electric equipments  Understood how devices like alarm clocks, wrist watches, and cameras work without electricity that is by using chemical cell.  1. Understood the importance of switch in a circuit.	Make any electric game, device or a simple torch by applying the concept of electric switch. This activity will be assessed on the basis of following rubrics:  1. Description of model 2. Construction 3. Organization
		safety measures to be followed while		These pins will work as a switch. The concept of electric switch will		
1		handling		be taught through this.		

July	Practical writing and record completion(6 periods)					Subject enrichment 1 based on practicals of testing of food components.
August (20)	PBL introduction and explanation (4 periods)					Subject enrichment –II group activity-pbl conduction
August	Theme 1 Garbage in garbage out (8 periods) Sub theme Waste management Bio and non biodegradable wastes	1. Waste control, recycling of paper and other waste products, things that do not rot and things that rot. 2.to differentiate between degradable and non degradable substances. 3. to follow waste management techniques	1. To sensitize towards the need to manage waste 2. To encourage them to use recycled paper. 3. To motivate them to apply three R's of management. 4. Accept the responsibility for the cleanliness of environment.	Various activities based on waste management like composting, vermicomposting, making of ecofriendly paper. Discussion on waste management. Making Paper Mache products/ best out of waste.	<ol> <li>They were encouraged to use recycled paper.</li> <li>Motivated to apply 3 R's of waste management.</li> <li>Developed the skills of Awareness, Analytical Skills, Problem Solving, Observational Skills, Critical Thinking, and Creativity.</li> </ol>	Assessment of activity mentioned by applying rubrics: knowledge, observation, synthesis and analysis.

August	2. water (8 periods)  Fibre to fabric	To enable the students to:  1. Know the properties, sources and usage of water.  2. Make aware about the necessity of water.  3. Recapitulate the concept of water cycle.  4. Understand the role of transpiration in water cycle and cloud formation.  5. Comprehend how water is recharged under the ground.  6. Predict the consequence of floods and droughts.	The learners will:  1. Be able to estimate the amount of water used by his family in a day.  2. Empathized towards the necessity of water in water scarce areas.  3. Reason for phenomenon like accumulation of dew drops on the leaves of grass or appearance of fog near ground on winter mornings.  4. Show concern for the areas where most of the land is covered with concrete.  5. Imbibe the value of conservation of water.  6. Suggest the technique of rain water harvesting to conserve water for future use.	Activity 1 Student oriented activity to develop the concept of evaporation. Take two plates filled with water. Place one of its plates in sunlight and the other in shade. Observe the two plates after 15 minutes. The disappearance of water in the plate would clarify the concept of evaporation.  Activity 2 Take a glass filled with water and add a few pieces of ice to it. Wait for two minutes and observe the changes on the surface of the glass. This will confirm the process of condensation.  Activity 3 Video demonstration on Rainwater Harvesting	<ul> <li>The students learnt:</li> <li>The properties, sources and usage of water.</li> <li>The role of transpiration in water cycle and cloud formation.</li> <li>Reason for phenomenon like accumulation of dew drops on the leaves of grass or appearance of fog near ground on winter mornings.</li> <li>To estimate the amount of water used by his family in a day.</li> <li>How water is recharged under the ground.</li> <li>The technique of rain water harvesting to conserve water for future use.</li> </ul>	Collect the pictures to floods or droughts from old magazines or newspapers. Paste them in the note book and write about the problems that people would have faced. It will be assessed on the basis of following rubrics:  1. Purpose  2. relevance
September	1 lore to fault	to	1. Interpret the	conduct the following <b>activities</b> :	Students learnt.	mat using newspaper

0	1. Understand	manager of finding	1 Visit a parker tailaring at	1 The concert of fiber	denicting the wassing
8 periods		reason of finding	1. Visit a nearby tailoring shop	1. The concept of fiber,	depicting the weaving
	the concept of	loose thread at the	and collect cuttings of fabrics	yarn and fabric.	patterns. It will be assessed
	fiber	edges of a fabric.	left over after stitching (prior	2. The devices used for	under following heads:
	2. Differentiate	2. Understand why	information would be given).	spinning such as takli	1. Understanding
	between	the end of a thread	On the basis of this activity,	and charkha.	2. Application
	natural and	separates into fine	they will be asked few	3. The processing of jute	3. creativity
	synthetic fiber	threads while	questions like:	and cotton in industries	
	3. Identify	putting it into the	Do you see any loose threads	by handlooms and	
	different	needle.	at the edges of the cuttings?	power looms.	
	natural and	3. Realize the use of	Do you feel any difference in	4. The value of sensitivity	
	synthetic	charkha by	the texture of these cuttings?	towards environment	
	fibers- such as	Gandhiji as a part		through weaving activity	
	cotton, jute,	of independence	2. With the use of above	by the use of waste stuff.	
	polyester and	movement.	activity the concept of fiber	5. Skills like	
	rayon	4. Develop the value	will be introduced followed	experimentation,	
	4. Comprehend	of sensitivity	by yarn and spinning.	observation, analysis	
	how cotton	towards	Students will bring some	and will be able to judge	
	fibers are	environment	cotton wool from home and will roll	between natural and	
	obtained from	through weaving	it out into a wick to clarify the	synthetic fibers through	
	cotton bolls.	activity by the use	concept of yarn.	burning test activity.	
	5. To know the	of waste stuff.	J J	6. Why the end of a thread	
	devices used	5. Develop skills like	3. Now teacher will introduce	separates into fine	
	for spinning	experimentation,	natural and synthetic fibers	threads while putting it	
	such as takli	observation,	and the same will be tested	into the needle.	
	and charkha.	analysis and will	with the help of burning test	7. How knitting is different	
	6. Understand	be able to judge	activity by the students. For	from weaving.	
	how knitting is	between natural	this, students will burn	8. To apply burning test to	
	different from	and synthetic	different cuttings of fabrics	differentiate natural and	
	weaving.	fibers through	(used in the above activity)in	synthetic fibers.	
		burning test	order to identify and make	synthetic fibers.	
	11 7	9	out a difference between	5. and collect cuttings of	
	test to differentiate	activity.		fabrics left over after	
			natural and synthetic fibers		
	natural and		by the burning smell and	stitching (prior	
	synthetic		their ash.	information would be	
	fibers.			given). On the basis of	

4. Now the students will be shown a video clip asked few questions (https/:www.learnnext.com) like:    based on the cultivation of jute and cotton along with threads at the edges of their processing in industries where they are operated by either handloom or power loom.  4. Now the students will be asked few questions like:  Do you see any loose threads at the edges of the cuttings?  Do you feel any difference in the texture of these cuttings?
6. With the use of above activity the concept of fiber will be introduced followed by yarn and spinning.  Students will bring some cotton wool from home and will roll it out into a wick to clarify the concept of yarn.
7. Now teacher will introduce natural and synthetic fibers and the same will be tested with the help of burning test activity by the students. For this, students will burn different cuttings of fabrics (used in the above activity)in order to identify and make out a difference between natural and synthetic fibers by the burning smell and their ash.

september					Now the students will be shown a video clip (https/:www.learnnext.com) based on the cultivation of jute and cotton	
	PBL submission(8) + Revision- 7periods					
October (22)	1. Getting to know plants (11 periods)  Sub theme Types and Parts of plant  Root and shoot system	1. To make them understand the morphological structure and function of root, stem and leaves.  2. To analyze the relationship between 1) types of root system 2) Leaf venation.	.1Imbibe the value of conservation of nature. 2. Show concern for the protection of environment. 3. Reason for the differentiated root system and leaf venation in different plants.	Observing germination of seeds, comparison of tap and fibrous root systems and relating it with leaf venation.  Presentation of the topic through PPT.	1. Learnt the morphological structure and function of root, stem and leaves.  2. analyzed the relationship between 1) types of root system 2) Leaf venation. 3. Reason for the differentiated root system and leaf venation in different plants. 4. Imbibed the value of conservation of nature.	By the dissection of flower and labeling its individual parts. Rubrics: observation and analysis
October	Air around us (11 periods)	To enable the students to:  1. Familiarize with the properties of	The learners will:  1. Reason for the rotation of firki and the weather cock.	Activity 1 Insert an inverted plastic/glass bottle in a bucket filled with water first in a straight and then in a tilted position to detect the presence of air in the	The students learnt:  1. To apply test for the presence of oxygen to support burning.  2. The importance of	Demonstration of burning candle activity by a teacher where a burning candle will be placed in flat plate filled water and then be covered

air.  2. Test with the activities that air occupies space.  3. Know the composition of air.  4. Apply test for the presence of oxygen to support burning.  5. To confirm the presence of air in soil.  6. Understand the importance of balance of	3.	be assured that air is present everywhere and this can be felt when objects like empty bottle or glass is placed in a bucket full of water in the form of bubbles. Investigate the reason for blowing off of a burning candle when covered with glass. Interpret why some tiny shining particles are seen	Activity 2 Demonstration by a teacher to show that the air is dissolved in water. For this a vessel filled with water is placed over a burner. The rising bubbles inside the water of vessel will confirm the same.  Activity 3 Students will collect a dry lump of soil from the school garden in a vessel/small container and would pour water over it. The emergence of bubbles will confirm the presence of air in the soil.	balance of gases for survival.  3. That most of the activities on the earth are possible due to the presence of air.  4. Why during an incident of fire one is advised to wrap a woolen blanket over a burning object.  5. The Reason for the rotation of firki and the weather cock.	by a glass. The blowing off of a candle and the rise in level of water will give the concept of presence of oxygen in air. Same activity will be performed by students and assessed under following heads:  1. Understanding 2. Observation Analysis
survival. 7. Comprehend that most of the activities on the earth are possible due to the presence of air.	<ul><li>5.</li><li>6.</li></ul>	sunlight enters the room through a slit.  Be able to tell why during an incident of fire one is advised to wrap a woolen blanket over a burning object.  Realize the importance of wearing mask while passing through a dusty			

November (20)	Theme 1.How do animals move?- 10 periods  Sub theme Skeletal system Movement in different animals.	1. To them aware about the animal movements. 2. To help them understand the types of joints. 3.To relate the concept of body movement in different categories of animals	crowded area.  7. Appreciate the interdependence of living organisms for the exchange of gases.  1. To infuse integrated value of animal body and body movements.  2. to develop skills of Knowledge, Observation, Analysis, synthesis.  3. to make them aware about the coordination pattern of the animal body.	Observation of 1.nature 2.model of skeleton 3. animal specimen	1. aware about the animal movements. 2. Understand the types of joints. 3. related the concept of body movement in different categories of animals 4. infused integrated value of animal body and body movements 5. developed skills of Knowledge, Observation, Analysis, synthesis.	Practical- showcasing of animal specimen Rubrics: experimentation, observation and analysis.
	2. Theme Light, shadow and reflection - 10 periods  Sub theme Luminous and illuminated objects. Solar and lunar eclipse. Shadow formation Reflection	1. To provide them the knowledge of luminous and non luminous objects. 2. Explain how pinhole camera works. 3. Occurrence of solar and lunar eclipses.	1.To apply the concept of pinhole camera. 2.To help them apply the concept of rectilinear propagation of light. 3. To inculcate reasoning ability	<ul><li>1.Discussion and observing shadow formation of various objects.</li><li>2. making of pinhole camera.</li></ul>	<ol> <li>understood the occurrence of solar and lunar eclipses</li> <li>Applied the concept of pinhole camera.</li> <li>Applied the concept of rectilinear propagation of light.</li> <li>inculcated reasoning ability</li> </ol>	Formation of pinhole camera Rubrics: organization and creativity.

December	Living organisms and their surroundings- (10 periods)	1. To give the concept of food chain. 2. To enhance their knowledge regarding environment. 3. To give the concept of food chain, habitat and adaptations of different animals.  4.To list the changes or feelings one faces when moving from one type of climate to other. 5. To discuss the types of animals present in the different habitats and the effect of change in surrounding environment on living organisms.  6.Group Activity: Learners in groups will present the life of living organisms in habitats like mountains, desert, grasslands, and oceans	1. To compare the adaptations of different animals. 2. To develop skills of Awareness, Analytical Skills, Problem Solving, Observational Skills. 3. To imbibe aesthetic values.	1. Students to create a model habitat to demonstrate an understanding of interactions between biotic and abiotic components of a habitat.  2. Students to draw a flow chart to explain roles and interactions of carnivores, herbivores and decomposers within a habitat	<ol> <li>enhanced their knowledge regarding environment.</li> <li>Given the concept of food chain, habitat and adaptations of different animals.</li> <li>Compared the adaptations of different animals.</li> <li>developed skills of Awareness, Analytical Skills, Problem Solving, and Observational Skills.</li> <li>imbibed aesthetic values</li> </ol>	
December	Performing and writing of practicals					Subject Enrichment Activity III-(individual)

	10 periods					Writing and conduction of practicals (08). Rubrics- experiment, observation and viva
January	1.Motion and measurement - 10 periods	To impart the knowledge of different methods of measurement.  2. To apply the concepts of measurement in everyday life.  3. Know the earlier methods of measurement.	<ol> <li>To help them analyze different kinds of motions in surrounding.</li> <li>Estimate small distances such as length of pencil.</li> <li>Follow proper precautions while taking reading of scale.</li> </ol>	<ol> <li>Measurement of a curved line.</li> <li>Finding the length and width of an object.</li> <li>Comparing traditional and modern methods of measurement</li> <li>worksheet on measuring in metric.</li> <li>Measurement with the help of body parts (ancient system for measurement</li> <li>Measurement with the help of standard units of measurement (metre, kilogram etc.)</li> </ol>	<ol> <li>analyzed different kinds of motions in surrounding.</li> <li>Estimated small distances such as length of pencil.</li> <li>Followed proper precautions while taking reading of scale.</li> <li>applied the concepts of measurement in everyday life</li> </ol>	The activity of measurement of a curved line can be assessed by applying the rubrics: analysis and synthesis.
January-23	IDC explaination+ time for for group discussion- 8 periods + practice for IDC- 5 periods					
February-23	Fun with magnets- 12 periods	<ol> <li>Properties of magnet, like poles repel and unlike poles attract each other.</li> <li>To provide knowledge of the properties of magnet.</li> <li>To differentiate between natural and</li> </ol>	<ol> <li>To synthesis the knowledge of making a temporary magnet.</li> <li>Intellectual use of magnets in day to day life.</li> </ol>	<ol> <li>Construction of magnetic compass</li> <li>Demonstrating how things are attracted by a magnet</li> <li>Activity to locate poles of a magnet, activity with iron filings and paper.</li> <li>Magnetic and non-magnetic materials:</li> <li>Finding of directions with the help</li> </ol>	<ol> <li>Synthesized the knowledge of making a temporary magnet.</li> <li>Knowledge of the properties of magnet.</li> <li>Developed the skills of Awareness, Analytical Skills, Problem Solving, Observational Skills, Critical Thinking, and Creativity.</li> </ol>	Assessment of activity mentioned by applying rubrics: experimentation, synthesis and knowledge.

		artificial magnet.		of a bar magnet. 6. Construction of a temporary magnet.		
	2.Changes around us -11 periods	<ol> <li>Different physical and chemical changes</li> <li>Students will be able to distinguish between reversible and irreversible changes.</li> <li>They would get knowledge about different kinds of changes.</li> </ol>	1. To make them aware about the changes taking place in the surrounding. 2. Students will be able to relate the changes with environment and everyday life.	Various activities to demonstrate reversible and irreversible changes like 1. Folding and unfolding of paper.  2. cutting down of vegetables  3. Cooking and baking of food items.  4. Blowing and bursting of a balloon.	<ol> <li>Distinguish between reversible and irreversible changes.</li> <li>They would get knowledge about different kinds of changes.</li> <li>developed the skills of Awareness, Analytical Skills, Problem Solving, Observational Skills, Critical Thinking, Creativity,</li> </ol>	Assessment of activity mentioned by applying rubrics: observation, evaluation and synthesis.  Sub enrichment 4-IDC
March-(14)		Revision, problem solving, note book completion and correction				