

CHOITHRAM SCHOOL, MANIK BAGH, INDORE
ANNUAL CURRICULUM PLAN SESSION 2017 – 2018

CLASS: VIII
SUBJECT: SCIENCE

Month & Working Days	Theme/ Sub-theme	Learning Objectives		Activities & Resources	Expected Learning Outcomes	Assessment
		Subject Specific (Content Based)	Behavioural (Application based)			
June-July 15	Force and Pressure	<p>Students will be able to</p> <ol style="list-style-type: none"> 1. Understand the effect of force. 2. Comprehend about the different types of forces. 3. Explain the factors affecting different types of forces. 4. Understand the difference between mass and weight. 5. Become aware of the condition of weightlessness. 5. Understand the factors affecting fluid pressure. 6. Understand the various ways of coping up with varying pressure conditions. 	<p>Students will be able to</p> <ol style="list-style-type: none"> 1. Apply necessary force to create a change in a fruitful way. 2. Analyze the effects of different types of forces for example no change is possible when the applied force is equivalent to the opposing force. 3. Broaden up the thoughts in order to reduce the inner pressure which can result in blast. 4. Sensitize towards the nature by knowing various techniques of reducing pressure on the Mother Earth. 	<ol style="list-style-type: none"> 1. Students will be divided in two groups in which they will discuss and give the day to day examples for push and pull. 2. Tug of War 3. Measurement of the weight of an object using a spring balance and studying the impact of gravitational force. 4. Demonstration of attractive and repulsive property of magnets for understanding magnetic force. 5. Demonstration of electrostatic force by the attraction of paper pieces towards an electrically charged comb. 6. Demonstrating that liquids exert pressure-a) On the walls of the container b) On the base of the container 	<ol style="list-style-type: none"> 1. Students are aware about the different types of forces and their effects. 2. Students know the difference between mass and weight. 3. They are ready to handle the hurdles coming in their lives by increasing their efforts. 4. They are aware about the factors affecting pressure. 5. Students can use the equipments based on fluid pressure like syringe, piston etc. 6. They know about the working of vacuum cleaner. 7. Students can take necessary measure to reduce pressure on Mother Earth. 	<p>Unit test Quessnaire Half Yearly Exam</p>

		7. Explain the working of a rubber sucker, syringe and many other devices using the fluid pressure.				
July-August 15	Sound	<p>Students will be able to</p> <ol style="list-style-type: none"> 1. Explain propagation of sound in the medium. 2. Understand about the characteristics of sound- pitch, loudness and intensity. 3. Know the unit of frequency, wavelength, velocity and loudness of sound. 4. Study the mechanism of various musical instruments. 4. Comprehend audible and inaudible sound 5. Explain the structure and 	<ol style="list-style-type: none"> 1. Students will be able to analyze different types of sound on the basis of their characteristics. 2. They will use proper units while describing the sound and its characteristics. 3. They can reason out why we are not able to listen some sounds though they are created by sources like supersonics, certain animals etc. 4. Create their own musical instruments and enjoy music through them. 5. Feel blessed and thankful to God for the sense of 	<ol style="list-style-type: none"> 1. Teacher will strike the tuning fork on rubber against any surface and place it near the ears of students. 2. Teacher will stretch and compress spring. She will ask the students to relate it with the propagation of sound. Students will observe then on compressing, the turns in the spring come closer and when it is stretched, the turns in the coil move farther 3. Orchestra Teacher will ask the students to bring their musical instruments of interest in class. The students will play the music. The other students will listen the different sounds created by them and identify them as shrill or bass sound, loud or soft sound. 4. Making of simple musical instruments like Jal Tarang, Ek Tara, flute etc. with the help of waste materials. 5. Teacher will take two paper strips and hold both of them in front of the mouth holding their ends. Air will be blown in the space between them. Sound will be produced. 	<ol style="list-style-type: none"> 1. Students know how sound propagated in the medium and reaches to us . 2. They can make their own musical instruments and study the different sounds produced by them. 3. They are aware about the differences of sound and reason for it. 4. They know how ear enables us to listen sound. 5. They are aware about the short term and the long term harmful effects of noise pollution. 6. They will take necessary measures for reducing noise pollution. 	Classroom activity- Article writing on noise pollution

		working of human ear 5. Acquaint themselves with the various causes of noise pollution and its prevention	hearing given to them. 6. Sensitize themselves and their fellow beings towards nature by taking suitable measures for reducing noise pollution.			
August-September 10	Friction	Students will be able to understand- 1. Terms related to friction 2. Factors affecting friction 3. Types of friction 4. How to measure friction 5. Advantages and disadvantages of friction 6. Methods of increasing and reducing friction	Students will be able to – 1. Compare the different types of friction. 2. Use necessary techniques for increasing or reducing friction.	1. Study of different types of surfaces on the basis of roughness or smoothness. 2. Measurement of friction with the help of spring balance. 3. Discussion about various advantages and disadvantages of friction	1. Students are acquainted with the different types of friction. 2. They have realized that friction cannot be zero. 3. They are aware about the various techniques of increasing and reducing friction.	Class test Classroom activity- Effect of surface on friction
II nd Term						
October-November 15	Chemical effects of electric current	Students will be able- 1.To understand the concept of liquid conductors,	Students will be able to- 1. Identify electrolytes and non electrolytes by	1. To make them understand the fact that liquids conduct electricity. 2. Testing of conductivity of different solutions by LED. 2. Electroplating of copper from copper	1. Students can perform test for the identification of solutions as electrolyte or non electrolyte. 2. They know how coating	Unit test

		<p>electroplating and LED</p> <p>To understand the concept of, electroplating and various daily life applications of electroplating.</p>	<p>testing with LED.</p> <p>2. Arrange the experimental set up for electroplating.</p> <p>3. Apply the concept in daily life.</p>	<p>sulphate solution.</p> <p>Resources- Torch, bulb, wires and LED</p> <p>Video showing electrorefining and electroplating.</p>	<p>of expensive metals is put to make artificial jewellery.</p> <p>3. They know that the components of water can be separated by electrorefining.</p> <p>4. They are aware that pure water is an insulator. It can be made conducting by adding acid.</p>	
November-December 15	Light	<p>Students will be able to understand-</p> <p>1. Formation of image by plane mirror and its characteristics</p> <p>2. Multiple reflection</p> <p>3. Structure of human eye and its working</p> <p>4. Defects of eye and other eye disorders.</p>	<p>Students will be able to-</p> <p>1. Obtain multiple images by two inclined mirrors.</p> <p>2. Know how we are able to see the hair cut from back by multiple reflections.</p> <p>3. Know the causes of various eye disorders and their remedies.</p>	<p>1. Obtaining multiple images by multiple reflection</p> <p>2. Verification of laws of reflection</p> <p>Resources- Model of human eye, Plane mirrors, daily life experiences.</p>	<p>1. Students can apply the phenomenon of multiple reflection in daily life.</p> <p>2. They are able to verify the laws of reflection of light.</p> <p>3. They know the structure of human eye and functions performed by its different parts.</p> <p>4. They are aware of the causes of various eye disorders and their correction.</p>	Classroom activity- Calculation of number of images at different angles.
December-January 15	Some natural phenomenon	<p>Students will be able to-</p> <p>1. Understand static electricity and its effect, electric discharge, formation of lightning and</p>	<p>Students will be able to-</p> <p>1. Predict the type of electrostatic force between two charged bodies and charge by using electroscope.</p>	<p>Experiment with comb and paper to show positive and negative charges</p> <p>Force of attraction and repulsion between the charged bodies.</p> <p>Resources- Chalk duster, audio-visual aids</p>	<p>1. Students know that static charge can be established by rubbing two different objects.</p> <p>2. They know the charge can be detected by using electroscope.</p> <p>3. They are aware about the</p>	Assessment through questionnaire

		thunderstorm, 2. Understand cause of earthquake. 3. Know what to do during thunderstorm, lightning and earthquake.	2. Analyze the various factors causing thunderstorm and lightening. 3. Take necessary steps for mitigation in case of any natural disaster.		causes of earthquake and lightening. 4. They are aware about the safety measures that can be taken in case of natural disaster.	
February- March 9	Stars and solar system	Students will be able to understand- 1. Various celestial bodies and their characteristics 2. Different phases of moon Asteroids, meteors and comets. 3. Artificial satellites and their functions.	Students will be able to- 1. Identify the different constellations seen in the night sky. 2. Observe the different phases of moon seen in the sky. 3. Utility of comets in finding the time duration as they have periodic appearance	Demonstration of different phases of moon. Resources- Chalk, duster, black board, power point presentation, charts	1. Students can recognize the different constellations. 2. They know about the different phases of moon. 3. They know that the periodic events taking place in the sky can be used for finding time. 4. They know about the various artificial satellites launched in space and their purposes.	Power point presentation on various topics like 1. Phases of moon 2. Artificial satellites 3. Constellations

SUBJECT: Biology

Month & Working Days	Theme/ Sub-theme	Learning Objectives		Activities & Resources	Expected Learning Outcomes	Assessment
		Subject Specific (Content Based)	Behavioural (Application based)			
June- 16	crop production	Specific Objectives:- To enable the students to	Behavioral objectives The learners will:	1. Seed selection through soaking of seeds.	The students learnt: 1. What is crop and	identifying pictures of any five agricultural tools and viva based on

		<ol style="list-style-type: none"> 1. Know what is crop and understand the climatic conditions of kharif and rabi crop. 2. Know the method of preparation of field soil. 3. Understand tilling and ploughing practices. 4. Compare traditional tools with modern agricultural implements. 5. Analyse the importance of adding manures and fertilizers to the crop. 6. Explain the importance of supply of water to crops at different time intervals. 7. Analyze the impact of weedicides over weeds. 8. Describe the importance of silos and granaries for food storage. 	<ol style="list-style-type: none"> 1. Inculcate the hard work to produce the desired results 2. Appreciate the systematic approach to get the desired results. 3. Realize the fact that in order to sustain a thing its nourishment is must. 4. Learn to eradicate unwanted things from life that may hinder their progress. 5. Developed the skill of analysis through the activity of seed germination. 	<p>2. Action of manures and fertilizers.</p>	<p>understand the climatic conditions of kharif and rabi crop.</p> <ol style="list-style-type: none"> 2. Compare traditional tools with modern agricultural implements. 3. The importance of adding manures and fertilizers to the crop. 4. The value of hard work to produce the desired results 5. The systematic approach to get the desired results. 6. To eradicate unwanted things from life that may hinder their progress. 7. The skill of analysis through the activity of seed germination. 	<p>it rubrics: 1 identification 2 knowledge Unit test 1</p>
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July-10	Conservation of plants and animals	<p>Specific Objectives To enable the students to</p> <ol style="list-style-type: none"> 1. Know about deforestation, its causes and consequences. 2. Define and differentiate between different protected areas. 3. List out the flora and fauna of their areas. 4. Write the endemic species of a particular biosphere reserve. 5. Make aware about endangered species, project tiger and the red data book. 6. Understand the need of migration among animals. 7. Comprehend the importance of trees and reforestation. 	<p>Behavioral objectives</p> <ol style="list-style-type: none"> 1. Be sensitized towards nature against deforestation 2. Appreciate the use of recycled paper. 3. Be able recognize some of the endemic species of his area/region. 4. Realize the importance of flora and fauna in the ecosystem and also learn the value of conservation of wildlife. 5. Learn the key concept that life is possible through the interdependence of plants, animals and humans. 6. Appreciate the importance of 	<ol style="list-style-type: none"> 1. Introduction of topic after discussion with students on the basis of experiences shared by students regarding their visit to any national park or wildlife sanctuary. 2. Activity of data collection on protected areas of the country and showing these areas in an outline map of the state and the country. 3. Students will prepare paper bags from the used and loose papers and would be encouraged to use them. 4. Identify flora and fauna of your area and list them. 	<p>The students learnt:</p> <ol style="list-style-type: none"> 1. About deforestation, its brief report in the notebook regarding various factors disturbing the biodiversity of their area. causes and consequences. 2. To appreciate the use of recycled paper. 3. To define and differentiate between different protected areas. 4. Importance of flora and fauna in the ecosystem and also learn the value of conservation of wildlife. 5. About endangered species, project tiger and the red data book. 6. The need of migration among animals. 7. The importance of trees and reforestation. 8. The key concept that life is possible through the interdependence of plants, animals and 	<p>Group Discussion on various factors disturbing the biodiversity of their area and how they can be checked. group coordination(group) analysis(individual)</p>

			migration for flexibility.		humans.	
August-9 And September-4	Cell-structure and function	<p>Specific Objectives</p> <p>1) To make them learned and understand about cell and structural organization of cell.</p> <p>2) To enhance the ability to comprehend the role and importance of different organelles present in the cell.</p> <p>3) To make them share their opinion on evolution of self autonomous organelles like- Mitochondria and plasmid</p> <p>4) To enhance the ability to understand the mechanism of different organelles with reference to</p>	<p>behavioural Objectives To emphasized on development of skills like observational and experimental and inculcating values like division of labor and team work (as all the organelles divide the work among themselves), leadership(as nucleus work as controlling unit), obedience (as all organelles obey the command of controlling unit)</p> <p>Students will be able to identify that cuts and wound heals due to the process of cell division They will be sensitized and will be able to apply their knowledge that genetic disorder cannot be cured.</p>	<p>.1 To study and observe the diverse type of cell and organelles of plants and animals through permanent slides.</p> <p>2.Showing slides of paramaecium</p> <p>3.Making an onion peel slide and observing under microscope</p>	<p>Learner learnt and understood about cell and structural organization of cell.</p> <p>2. Skills like observational and experimental were developed in the students and values like division of labor and team work (as all the organelles divide the work among themselves), leadership (as nucleus work as controlling unit), obedience (as all organelles obey the command of controlling unit) were inculcated among the students.</p> <p>3. Students were able to identified that cuts and wound heals due to the process of cell division</p> <p>4. They were sensitized that genetic disorder cannot be cured.</p> <p>5. They were able to analyze that formation of one organelle lead the</p>	<p>Observe the given slide and identify , write comments and draw a well labeled diagram</p> <p>Rubrics: Identification Comments (description)</p>

					<p>formation of other organelle which inculcated the value of coordination, obedience etc.</p> <p>6. Students ability were enhanced to understand the mechanism of different organelles with reference to their importance in vital role</p>	
Oct- November	Microorganisms: friend and foe	<p>Specific Objectives:</p> <p>1. Students are able to identify the various microorganisms and their structure.</p> <p>2. They would be aware about the harms and benefits of microorganisms.</p> <p>3.They would get the knowledge about the commercial uses of microbes.</p> <p>4. to learn the role of microbes in nitrogen fixation in nature.</p> <p>5. to be aware of the diseases caused by them.</p> <p>6. to gain knowledge about various food preservation techniques.</p>	<p>Behavioral objectives</p> <p>student will learn</p> <p>1. how a little amount of curd can be used to set a larger quantity of milk into curd.</p> <p>2. Why children are given vaccination.</p> <p>3. why dough of food items like bhatura and idli rise after fermentation.</p> <p>4. Appreciate the importance of microbes in industries like alcohol, wine, bread, bakery.</p> <p>5.Realise their importance in medicines such as antibiotics, vaccines.</p> <p>6. understand the need of food preservation techniques.</p>	<p>1. Showing video on microorganisms.</p> <p>2. Observation of a drop of pond water under microscope.</p> <p>3. Showing fermentation of dough rise in volume.</p> <p>Showing slides of microorganisms.</p>	<p>Students would:</p> <p>1. identify the various microorganisms and their structure.</p> <p>2. aware about the harms and benefits of microorganisms.</p> <p>3. Get the knowledge about the commercial uses of microbes.</p> <p>4. Why children are given vaccination.</p> <p>5. Appreciate the importance of microbes in industries like alcohol, wine, bread, bakery.</p> <p>6. Realise their importance in medicines such as antibiotics, vaccines</p>	<p>Assessment through practicals-sub enrichment activity.</p> <p>Rubrics:</p> <p>1. experiment</p> <p>2 viva</p> <p>3 record</p>

December-january	Reproduction in animals	<p>Specific Objectives: To enable the students to</p> <ol style="list-style-type: none"> 1. Understand male and female reproductive systems. 2. differentiate between oviparous and viviparous animals. 3. learn about IVF technique and test tube babies. 4. gain knowledge about internal and external fertilization and development of embryo. 5. be aware of asexual methods like cloning. 	<p>Behavioral objectives student will learn</p> <ol style="list-style-type: none"> 1. How do babies develop inside the mother. 2. Why does our body change when we reach our teen age. 3. how sex of the baby is determined. 4. some animals lay eggs while some give birth to young ones. 5. how test tube babies are born. 	<ol style="list-style-type: none"> 1. Look out for clusters of frog eggs floating in water and write down the color and size of eggs. 2. try to collect eggs of different of different animals like-frog, lizard, hen , crow. Make drawings of different eggs you have collected. 3. Explanation of life cycle of frog. 4. Discussion on reproductive health. 	<p>Students would:</p> <ol style="list-style-type: none"> 1. Understand male and female reproductive systems. 2. Differentiate between oviparous and viviparous animals. 3. Learn about IVF technique and test tube babies. 4. How do babies develop inside the mother? 5. Why does our body change when we reach our teen age. 6. How sex of the baby is determined. 7. Some animals lay eggs while some give birth to young ones. 8. How test tube babies are born. 	Unit test 2
Febuary-8+march(5)	Reaching the age of aadolescence	<p>Specific Objectives</p> <ol style="list-style-type: none"> 1.They would be provided knowledge about the various functions performed by different endocrine glands, Changes during puberty, Secondary sexual character. 	<p>Behavioral objectives students learnt</p> <ol style="list-style-type: none"> 1. what-is adolescence 2 the noticeable changes that occur during puberty such as-increase in height, body 	<ol style="list-style-type: none"> 1.Calculation of full height likely to be at the end of adolescence and drawing the graph for the same. 2. Preparing charts and posters on adolescent diets and paste them in class to create awareness. 	<p>They would be provided knowledge about the various functions performed by different endocrine glands, Changes during puberty, Secondary sexual character.</p> <ol style="list-style-type: none"> 2.They would be able to 	<p>Assesement through-</p> <p>Oral interaction on location and hormones and functioning of hormones secreted by endocrine glands.</p> <p>Rubrics:</p>

		<p>2.They would be able to relate their concepts with puberty and adolescence.</p> <p>3.They would be made aware about adolescent problems</p> <p>4. They would learn about nutritional needs and reproductive health of adolescent.</p>	<p>shape, change in voice of males, appearance of pimples</p> <p>Mental and emotional maturity bodily changes during adolescence</p> <p>4. myths and taboos regarding bodily changes during adolescence</p>	<p>3. Discussion on avoiding the use of drugs.</p>	<p>relate their concepts with puberty and adolescence.</p> <p>3.They would be made aware about adolescent problems.</p> <p>1. what-is adolescence</p> <p>2 the noticeable changes that occur during puberty such as-increase in height, body shape, change in voice of males, appearance of pimples</p> <p>Mental and emotional maturity bodily changes during adolescence</p>	<p>Knowledge accuracy</p>
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SUBJECT:Science (chemistry)

Month & Working Days	Theme/ Sub-theme	Learning Objectives		Activities & Resources	Expected Learning Outcomes	Assessment
		Subject Specific (Content Based)	Behavioural (Application based)			
<p>June – July</p> <p>14 days</p>	<p>Theme-Synthetic</p> <p>1.Fibres and Plastics</p>	<p>1.Recall the meaning of the term fiber & fabrics and list the natural fibers.</p>	<p>1. learners will learn to collaborate with the peer group for productive outcome.</p>	<p>Recall activity</p> <p>Learners will enlist the known natural and synthetic fibres with their uses, the reason for the choice and advantages of using them in terms of cost durability and maintenance in the tabular form.</p>	<p>1.Learner will be able to define the term fiber , yarn and fabric</p>	<p>1. Conceptual Unit Test</p>

		2.Understand the meaning of synthetic fiber .and contrast natural and synthetic fibers.	2.learners will be environment sensitive and promote 'R' policy.	Learners will form different formations by long chains and understand the terms like monomer, polymer and polymerisation to understand the formation of synthetic fiber.	2.Learner will be able to define the term monomer, polymer & polymerization.	2.(Informal Assessment) Analysis of the strengths of fibres
		3.State the term Plastics and differentiate between types of plastics; Recognize different linkages of monomers in plastics. Analyse the qualities of biodegradable plastics and nonbiodegradable ones.	3.learners will develop the strength to face the harsh situations.	Student Activity Learners will check the strengths of different types of threads and find the strongest using the different threads, a stand and weights.	3.Apply the knowledge of the properties of synthetic fibers before selecting a fiber for a particular purpose.	
	1. Types of synthetic fibres	4. Apply the knowledge of the properties of synthetic fibers before selecting a fiber for a particular purpose and Evaluate the effects of excessive use of plastics on environment .	4. learners will learn to use the available resources judiciously in a manner that their good qualities are enjoyed, at the same time without harming others	Student Activity (at home) Learners will find the water absorption capacity of different fabrics and discuss the observations. Different pieces of the fabrics will be dipped in the same amount of water and soaked for known time. The amount of water left at the end will be noted and the difference will give the water absorption .	4.Learner will describe and differentiate the properties and uses of plastics.	
	2. concept of monomers and polymers			Brain storming on Plastic – A Boon or Bane.	5.Learner will realise the harmful effects of excessive use of plastics on environment and apply	

					and suggest the 'R' policy.	
	3.Plastics – Types; Advantages and disadvantages;			<p style="text-align: center;">Videos</p> <p>Video https://www.youtube.com/watch?v=r4Q22ApGdd8 How its made - Plastics</p> <p>Video https://www.youtube.com/watch?v=tNXTtdD-s1w Plastics And The Environment</p> <p>https://www.youtube.com/watch?v=YEGewENa6E Environmental Impact of Plastic Water Bottles</p>		

Month & Working Days	Theme/ Sub-theme	Learning Objectives		Activities & Resources	Expected Learning Outcomes	Assessment
		Specific objectives	Behavioural objectives			
August-September 13 days	2. Coal and Petroleum	<ul style="list-style-type: none"> To understand that the formation of fossil fuels and differentiate the types as renewable and non renewable. To understand the process of destructive distillation of coal and refining of petroleum and 	<ul style="list-style-type: none"> Learners will appreciate and judiciously use fossil fuels and also provide appropriate alternatives. Learner will be environment sensitive. 	<p>Warm – Up Activity- The learners will take an account of the fuel consumption in the homes : like LPG, petrol / diesel or the CNG</p> <p>Learners will find out the total expenditure on electricity , petrol, and cooking gas in the house for the past three months . They will suggest the ways to reduce the consumption of all the three sources.</p> <p>Learners will mark the places in India where super thermal power plants and petroleum refineries are located .</p>	<ul style="list-style-type: none"> Learners have learned the formation of available natural resources like coal and petroleum They will come to know the different products and uses of the 	<ul style="list-style-type: none"> Observation (Informal Assessment) Understanding and analysis of the usage of the types of fuels like petrol, LPG, CNG; to find the alternatives; PPT presentation Half Yearly Exam

		<p>the uses of products in day to day life.</p> <ul style="list-style-type: none"> • Student should be able to explain basic facts about various renewable energy sources such as solar, hydropower, wind, geothermal, and biomass. • Identify the advantages and disadvantages of renewable energy sources • Explain basic economic concepts used to analyze energy issues • Contribution of the alternatives towards reducing emissions of air pollutants, greenhouse gases 		<p>Video watching - Coal</p> <p>https://www.youtube.com/watch?v=BQ_Ethb6_Wk</p> <p>https://www.youtube.com/watch?v=iN6LvH_4Q3g</p> <p>Video- Formation of petroleum and natural gas</p>	<p>same.</p> <ul style="list-style-type: none"> • They will have learnt the judicious use of the available resources and created awareness in the society. • They are sensitised towards environment. 	
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Month & Working Days	Theme/ Sub-theme	Learning Objectives		Activities & Resources	Expected Learning Outcomes	Assessment
		Subject Specific	Behavioural			

		(Content Based)	(Application based)			
October/November 12 days	3. Metals And Non- metals	<ul style="list-style-type: none"> To be able to Identify of substances as metals and non metals 	<ul style="list-style-type: none"> To retain one's unique qualities 	<ul style="list-style-type: none"> students would be provided some solid things like from laboratory and surroundings and would be asked to classify those on the basis of appearance ,texture, shininess and ringing sound 	<ul style="list-style-type: none"> Students will infer that metals are generally hard only with some exceptions Like sodium,potassium and lithium,and non-metals are soft and brittle. metals are good conductors of heat and electricity where as non-metals are not students will infer that metals are malleable and non-metals are brittle 	Experimental (informal assessment) Learners will be asked to test reactivity of metals and non metals with common acids and bases
	1. Physical and chemical Properties	<ul style="list-style-type: none"> Physical properties of metals like colour, texture, sonority , malleability,ductility etc 	<ul style="list-style-type: none"> While retaining one's unique qualities, one should be flexible as per the situations 	<ul style="list-style-type: none"> mentor will show the burning of magnesium ribbon,ash collected and tested with litmus mentor will show the burning of sulphur ,water added to the jar of sulphurdioxide and Tested with litmus mentor will demonstrate the reactivity of Na with water 	<ul style="list-style-type: none"> students will comprehend that different metals will react differently with water they will understand that reactive metals react with acids and bases to form 	

					hydrogen gas.	
	2. Reactions with Acids and Bases	<ul style="list-style-type: none"> To study the reactivity of metals and non-metals with air, water, acids and bases 	<ul style="list-style-type: none"> To be empathetic 	<ul style="list-style-type: none"> Students in groups will test the action of acids (dil HCl and H₂SO₄) on metals like Zn, Al, Fe 	<ul style="list-style-type: none"> They will displacement reactions are those reactions in which a more reactive metal displaces a less reactive metal from its salt solution Students will know the reactivity series and why the metals have different reactivity speeds students will recognize the uses of metals and non-metals in daily life. 	
	3. Displacement reactions	<ul style="list-style-type: none"> To analyse corrosion 		<ul style="list-style-type: none"> students will enact as metals and non-metals and display their physical and chemical Properties. 		
	4. Uses of metals and Non-metals in daily life	To understand the applications of metals and non metals in daily life.				

CHOITHRAM SCHOOL, MANIK BAGH, INDORE

ANNUAL CURRICULUM PLAN SESSION 2017 – 2018

CLASS: 8th

SUBJECT: Science (chemistry)

Month & Working Days	Theme/ Sub-theme	Learning Objectives		Activities & Resources	Expected Learning Outcomes	Assessment
		Subject Specific (Content Based)	Behavioural (Application based)			
June – July 14 days	Theme-Synthetic 1.Fibres and Plastics	1.Recall the meaning of the term fiber & fabrics and list the natural fibers.	1. learners will learn to collaborate with the peer group for productive outcome.	Recall activity Learners will enlist the known natural and synthetic fibres with their uses, the reason for the choice and advantages of using them in terms of cost durability and maintenance in the tabular form.	1.Learner will be able to define the term fiber , yarn and fabric	1. Conceptual Unit Test
		2.Understand the meaning of synthetic fiber .and contrast natural and synthetic fibers.	2.learners will be environment sensitive and promote ‘R’ policy.	Learners will form different formations by long chains and understand the terms like monomer, polymer and polymerisation to understand the formation of synthetic fiber.	2.Learner will be able to define the term monomer, polymer & polymerization.	2.(Informal Assessment) Analysis of the strengths of fibres
		Sub theme 3.State the term Plastics and differentiate between types of plastics; Recognize different linkages of monomers in plastics. Analyse the qualities of biodegradable plastics and nonbiodegradable ones.	3.learners will develop the strength to face the harsh situations.	Student Activity Learners will check the strengths of different types of threads and find the strongest using the different threads, a stand and weights.	3.Apply the knowledge of the properties of synthetic fibers before selecting a fiber for a particular purpose.	

	1. Types of synthetic fibres	4. Apply the knowledge of the properties of synthetic fibers before selecting a fiber for a particular purpose and Evaluate the effects of excessive use of plastics on environment .	4. learners will learn to use the available resources judiciously in a manner that their good qualities are enjoyed, at the same time without harming others	Student Activity (at home) Learners will find the water absorption capacity of different fabrics and discuss the observations. Different pieces of the fabrics will be dipped in the same amount of water and soaked for known time. The amount of water left at the end will be noted and the difference will give the water absorption .	4.Learner will describe and differentiate the properties and uses of plastics.	
	2. concept of monomers and polymers			Brain storming on Plastic – A Boon or Bane.	5.Learner will realise the harmful effects of excessive use of plastics on environment and apply and suggest the ‘R’ policy.	
	3.Plastics – Types; Advantages and disadvantages;			Videos Video https://www.youtube.com/watch?v=r4Q22ApGdd8 How its made - Plastics Video https://www.youtube.com/watch?v=tNXTtdD-s1w Plastics And The Environment https://www.youtube.com/watch?v=YEGewENa6E Environmental Impact of Plastic Water Bottles		

Month & Working Days	Theme/ Sub-theme	Learning Objectives		Activities & Resources	Expected Learning Outcomes	Assessment
		Specific objectives	Behavioural objectives			

<p>August-September 13 days</p>	<p>2. Coal and Petroleum</p>	<ul style="list-style-type: none"> • To understand that the formation of fossil fuels and differentiate the types as renewable and non renewable. • To understand the process of destructive distillation of coal and refining of petroleum and the uses of products in day to day life. • Student should be able to explain basic facts about various renewable energy sources such as solar, hydropower, wind, geothermal, and biomass. • Identify the advantages and disadvantages of renewable energy sources • Explain basic economic concepts used to 	<ul style="list-style-type: none"> • Learners will appreciate and judiciously use fossil fuels and also provide appropriate alternatives. • Learner will be environment sensitive. 	<p>Warm – Up Activity- The learners will take an account of the fuel consumption in the homes : like LPG, petrol / diesel or the CNG</p> <p>Learners will find out the total expenditure on electricity , petrol, and cooking gas in the house for the past three months . They will suggest the ways to reduce the consumption of all the three sources.</p> <p>Learners will mark the places in India where super thermal power plants and petroleum refineries are located .</p> <p>Video watching - Coal</p> <p>https://www.youtube.com/watch?v=BQ_Ethb6_Wk</p> <p>https://www.youtube.com/watch?v=iN6LvH_4Q3g</p> <p>Video- Formation of petroleum and natural gas</p>	<ul style="list-style-type: none"> • Learners have learned the formation of available natural resources like coal and petroleum • They will come to know the different products and uses of the same. • They will have learnt the judicious use of the available resources and created awareness in the society. • They are sensitised towards environment. 	<ul style="list-style-type: none"> • Observation • (Informal Assessment)Understanding and analysis of the usage of the types of fuels like petrol, LPG, CNG; to find the alternatives; PPT presentation • Half Yearly Exam
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		analyze energy issues <ul style="list-style-type: none"> • Contribution of the alternatives towards reducing emissions of air pollutants, greenhouse gases 				
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Month & Working Days	Theme/ Sub-theme	Learning Objectives		Activities & Resources	Expected Learning Outcomes	Assessment
		Subject Specific (Content Based)	Behavioural (Application based)			
October/November 12 days	3.Metals And Non- metals	<ul style="list-style-type: none"> • To be able to Identify of substances as metals and non metals 	<ul style="list-style-type: none"> • To retain one's unique qualities 	<ul style="list-style-type: none"> • students would be provided some solid things like from laboratory and surroundings and would be asked to classify those on the basis of appearance ,texture, shininess and ringing sound 	<ul style="list-style-type: none"> • Students will infer that metals are generally hard only with some exceptions Like sodium,potassium and lithium,and non-metals are soft and brittle. • metals are good conductors of heat and electricity where as non-metals are not • students will infer that metals are malleable and non-metals 	Experimental (informal assessment) Learners will be asked to test reactivity of metals and non metals with common acids and bases

					are brittle	
	1. Physical and chemical Properties	<ul style="list-style-type: none"> Physical properties of metals like colour, texture, sonority, malleability, ductility etc 	<ul style="list-style-type: none"> While retaining one's unique qualities, one should be flexible as per the situations 	<ul style="list-style-type: none"> mentor will show the burning of magnesium ribbon, ash collected and tested with litmus mentor will show the burning of sulphur, water added to the jar of sulphur dioxide and Tested with litmus mentor will demonstrate the reactivity of Na with water 	<ul style="list-style-type: none"> students will comprehend that different metals will react differently with water they will understand that reactive metals react with acids and bases to form hydrogen gas. 	
	2. Reactions with Acids and Bases	<ul style="list-style-type: none"> To study the reactivity of metals and non-metals with air, water, acids and bases 	<ul style="list-style-type: none"> To be empathetic 	<ul style="list-style-type: none"> Students in groups will test the action of acids (dil HCl and H₂SO₄) on metals like Zn, Al, Fe 	<ul style="list-style-type: none"> They will displacement reactions are those reactions in which a more reactive metal displaces a less reactive metal from its salt solution Students will know the reactivity series and why the metals have different reactivity speeds students will recognize the uses of metals 	

					and non-metals in daily life.	
	3.Displacement reactions	<ul style="list-style-type: none"> To analyse corrosion 		<ul style="list-style-type: none"> students will enact as metals and non-metals and display their physical and chemical Properties. 		
	4. Uses of metals and Non-metals in daily life	To understand the applications of metals and non metals in daily life.				

Month & Working Days	Theme/ Sub-theme	Learning Objectives		Activities & Resources	Expected Learning Outcomes	Assessment
		Subject Specific (Content Based)	Behavioural (Application based)			
December – January 13 days	Combustion and Flame	<ul style="list-style-type: none"> Recall the process of Combustion Recognize the necessary conditions of combustion Differentiate and compare the types of combustion on the basis of availability of oxygen Explore the 	<p>1.Learners will understand that it is very dangerous to sleep in a room with a coal fire burning and the doors and windows closed.</p> <p>2. The learners will be aware of the fire dousing and in times of need will render assistance.</p>	<p>1.Learners will collect different types of materials like – paper, cotton, straw, wooden icecream stick, dry leaves, nylon rope, piece of stone, piece of glass, iron nail, Copper wire, charcoal etc. each of the piece is held over a flame for some time. Materials that catch fire and burn are noted.</p> <p>2.A paper cup with filled with water has to be kept on a stand over a flame and observed whether it burns or not. The reasons are to be expressed for the same.</p> <p>3.The learners need to information on the different types of fuels used for various</p>	<p>1.Learners will recall the process of combustion and the conditions needed for it.</p> <p>2. They will differentiate and analyse the types of combustion occurring in real life.</p> <p>3. They will understand regarding the working of fire extinguishers.</p> <p>4. they will be able to analyse the cleaner fuel, that</p>	CONCEPTUAL UNDERSTANDING (INFORMAL ASSESSMENT) PPT ON ACID RAINS

		<p>working of a simple fire extinguisher</p> <ul style="list-style-type: none"> • Identify different zones of a candle flame • Explain the fuel efficiency in terms of calorific value 		<p>purposes. They will also find out which one is least expensive and least polluting.</p>	<p>is least expensive and sustainable.</p>	
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Month & Working Days	Theme/ Sub-theme	Learning Objectives		Activities & Resources	Expected Learning Outcomes	Assessment
		Subject Specific (Content Based)	Behavioural (Application based)			
February – March 10 days	4. Air and water Pollution	<p>Recall the composition of air and define the terms pollution and pollutants</p> <p>Explain air pollution ;List some air pollutants ; Discuss the sources of air pollutants; Examine the harmful effects of air pollutants</p> <p>Develop an understanding of Green</p>	<ul style="list-style-type: none"> • Learner will inculcate that too much of something or too little of the same in the life can be harmful. Every thing in the nature must be well balanced. One should be 	<p>1.Learners will make a note of the smoke , fumes, dust and dirty odour in the air at different spots like school, neighbor hood, outskirts of the city.</p> <p>2.Learners will tabulate the list of the common pollutants in air and water separately and find the information on the sources and the effects on the health of humans and thew environment.</p> <p>3.To collect water samples from various sources and test for the water quality parameters like clarity, colour ,odour, acidic /basic. This has to be tabulated and conclusion has to be drawn whether it is potable or not.</p>	<p>Learners will be able to define the terms pollution and pollutants.</p> <p>Learners will analyse the impacts of air and water pollution.</p> <p>Learner will be environment sensitive</p> <p>Learner will learn to be balanced in the harsh situations and be stable.</p>	Observation and Analysis (Based on activity 3)

		<p>house effect and Global warming and name various green house gases</p> <p>Explore the ways to reduce air pollution and predict the meaning of water pollution</p> <p>Enlist the factors responsible for water pollution</p> <p>Describe the meaning of potable water</p> <p>Determine various ways to reduce pollution</p>	<p>balanced in harsh situations in life.</p>			
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CHOITHRAM SCHOOL, MANIK BAGH, INDORE

ANNUAL CURRICULUM PLAN SESSION 2017 – 2018

CLASS: 8th

SUBJECT: Science (chemistry)

Month & Working Days	Theme/ Sub-theme	Learning Objectives		Activities & Resources	Expected Learning Outcomes	Assessment
		Subject Specific (Content Based)	Behavioural (Application based)			
December – January	Combustion and Flame	<ul style="list-style-type: none">Recall the process of CombustionRecognize the	1.Learners will understand that it is very dangerous to sleep in a room	1.Learners will collect different types of materials like – paper, cotton, straw, wooden icecream stick, dry leaves, nylon rope, piece of stone, piece of glass, iron nail,	1.Learners will recall the process of combustion and the conditions needed for it.	CONCEPTUAL UNDERSTANDING (INFORMAL ASSESSMENT) PPT ON ACID RAINS

<p>13 days</p>		<p>necessary conditions of combustion</p> <ul style="list-style-type: none"> • Differentiate and compare the types of combustion on the basis of availability of oxygen • Explore the working of a simple fire extinguisher • Identify different zones of a candle flame • Explain the fuel efficiency in terms of calorific value 	<p>with a coal fire burning and the doors and windows closed.</p> <p>2. The learners will be aware of the fire dousing and in times of need will render assistance.</p>	<p>Copper wire, charcoal etc. each of the piece is held over a flame for some time. Materials that catch fire and burn are noted.</p> <p>2. A paper cup with filled with water has to be kept on a stand over a flame and observed whether it burns or not. The reasons are to be expressed for the same.</p> <p>3. The learners need to information on the different types of fuels used for various purposes. They will also find out which one is least expensive and least polluting.</p>	<p>2. They will differentiate and analyse the types of combustion occurring in real life.</p> <p>3. They will understand regarding the working of fire extinguishers.</p> <p>4. they will be able to analyse the cleaner fuel, that is least expensive and sustainable.</p>	
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