

**Vidya Pratishthan's  
Dr.Cyrus Poonawalla School (CBSE)**

**Class - VIII**

**Annual Planning, 2022-23**

**Sub-Science (Chemistry)**

SR, No.	Content	Month and Working Days	Learning Objectives	Expected Learning Outcomes	Activity/Practical	Teaching aid	21 <sup>st</sup> Century Skill/Assesment
1.	<p><b>Synthetic fibres</b></p> <p>Characteristics of synthetic fibres</p> <p>Plastics as a material of choice</p> <p>Plastics and environment</p>	<p><b>April 22/8</b></p> <p><b>June 16/6</b></p>	<p>Bridge Course</p> <p>Distinguish between Synthetic &amp; Natural fibres based on their properties.</p> <p>Enlist different types of synthetic fibres and their characteristics in order to explain their specific uses</p> <p>List characteristics of plastic's ability to bend to differentiate between thermoplastics and thermosetting plastics</p> <p>Examine suggest the characteristics of plastic to explain its suitability in a variety of applications.</p> <p>Differentiate between plastics based on their ability to decompose in order to explain why plastics are a threat to the environment.</p>	<p>Differentiates materials such as, natural and human made fibre</p> <p>Applies learning of scientific concepts in daily life/real life situations in order to solve problems/give solutions/take preventive measures/etc.: (such as, segregating biodegradable and non-biodegradable waste)</p> <p>Discusses and appreciates stories of scientific discoveries</p>	<p>Experimental Investigation: Tensile strength of fibres</p>	<p>ICR, videos on Tata classedg, Concept map</p>	<p>Critical Thinking and Problem Solving Quiz On Tataclassedg</p>
2.	<p><b>Materials: Metals and Nonmetals</b></p>	<p>July 26/6</p>	<p>Differentiate between the commonly known materials based on their ability to be bent and formed into sheets, be</p>		<p>1.Experimental investigation for malleability of metals and non-</p>	<p>Different samples of metals to show the properties, ICR,</p>	<p>Critical thinking</p>

	<p>Physical properties of metals and non-metals</p> <p>Chemical Properties of Metals and Nonmetals</p> <p>Uses of metals and</p>	<p>August 23/7</p> <p>September 26/4</p>	<p>drawn into wires, ability to produce ringing sound, ability to conduct electricity, ability to conduct heat in order to define various properties of metal</p> <p>Categorize the commonly known materials as Metals &amp; Non-metals in order to explain their physical properties.</p> <p>Elaborate the chemical reactions of metals and non-metals with oxygen, water, acids and bases in order to distinguish between them.</p> <p>Apply the concept of reactivity of a metal to predict if a given metal will displace another metal in a displacement reaction</p> <p>Predict the utility of a given material for a specific task to reinforce the physical and chemical properties of metals and non-metals</p>	<p>Writes word equation in order to express chemical reactions: (such as, reactions of metals and non-metals with air, water and acids, etc.)</p> <p>Applies learning of scientific concepts in daily life/real life situations in order to solve problems/give solutions/take preventive measures/etc.: (such as using appropriate metals and nonmetals for various purposes;)</p>	<p>metals</p> <p>2. Practical: Reaction of non-metal with oxygen</p> <p>3. Reaction of metals with oxygen</p> <p>4. Reaction of dilute acids with metals and non-metals</p> <p>5. Study of displacement reaction</p>	<p>videos on Tataclass—edge</p>	<p>Practice of MCQ Test on Google form</p> <p>Periodic Test 1</p> <p>Half yearly Exam</p>
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	non-metals						
	Practicals and revision						
3.	<b>Coal and Petroleum</b>  Types of natural Resources  Coal          Petroleum	Oct-ober 18/6	<p>Classify natural resources based on their ability to replenish in order to distinguish between inexhaustible and exhaustible natural resources</p> <p>Discuss the process of formation of coal to explain why coal is an exhaustible natural resource. List the useful by-products after processing coal to explain that natural resources can be used to obtain useful products other than fuel.</p> <p>Infer why gas, oil and water found in this particular sequence in location where petroleum is found in order to explain that gas, oil their densities and ability to mix with each other</p> <p>Classify different constituents of petroleum according to their use in daily life in order to describe various by products besides fuel of petroleum that there is a large number of products obtained from petroleum other than fuel</p> <p>Discuss preventing energy crises</p>	<p>Differentiate between exhaustible and inexhaustible natural resources</p> <p>Describe how fossils are formed. Describe the process of carbonization Recognize the characteristics and uses of coal</p> <p>Locate the coal reserves in India</p> <p>Recognise the characteristics of petroleum List the constituents of petroleum and their uses</p> <p>Analyse the environmental impact of burning of fossil fuels</p>	<p>To make a list of various materials used in daily life and classify them as natural and man-made</p> <p>Experimental investigation of destructive distillation of coal</p>	<p>Picture of coal mine</p> <p>ICR –Tata classedged</p>	<p>Social skills Creative Thinking</p> <p>Quiz on Tata-classedged</p>

	Some Natural Resources are limited	<b>November 20/7</b>		Recommend the measures to conserve fossil fuels			
<b>4.</b>	<b>Combustion and Flame</b>  What is combustion  Ignition temperature  How to control fire	<b>December 21/06</b>	<p>Explain the process of combustion in order to describe the role of fuel and oxygen in the process as necessary conditions for combustion to take place</p> <p>Define ignition temperature to explain why minimum temperature is required for a substance to catch fire.</p> <p>Compile and list the commonly known inflammable substances to explain that certain substance catch fire than others.</p> <p>List the conditions necessary for producing fire to discover how combustible materials can be prevented from catching the fire.</p> <p>Differentiate between the type of combustion taking place in gas stove, burning of phosphorus and bursting of firecrackers to assess rapid combustion,</p>	<p>Infer that different substances have different ignition temperature .</p> <p>Conclude that attainment of ignition temperature is essential for a substance to burn</p> <p>Name different types of fire extinguishers.</p> <p>Explain the role of water as a fire extinguisher</p> <p>Interpret that water cannot be used as a fire extinguisher in case of oil fires</p> <p>Explain the working of a soda-acid type fire extinguisher</p>	<p>1.Combustible and non-combustible substances</p> <p>2.Combustion and ignition temp.</p> <p>3.Activity –Conditions needed for combustion</p> <p>Expt. –Structure of Flame</p>	<p>Different combustible and non-combustible substances</p> <p>Candle, glass, ICR</p>	Periodic Test

	Types of combustion	<b>January 26/8</b>	spontaneous combustion and explosion	<p>Explain different types of combustion</p> <p>Give examples of different types of combustion. Define fuel</p> <p>Classify fuels</p> <p>List the calorific value of fuels</p> <p>Explain the negative impact of fuels on the environment</p> <p>Identify the various zones of a candle flame</p> <p>Discuss non-luminous zone Explain the luminous zone.</p> <p>Describe the inner zone</p> <p>Define the blue zone</p>	Practical Evaluation		
	Flame		<p>Explain the different parts of flame in order to explain why goldsmiths blow the outermost zone of a flame to melt gold and silver</p> <p>Compare the calorific value of commonly used fuel to examine fuel efficiency</p> <p>List harmful by-products of burning fuel to be aware of its harmful effects on individuals and environment such as global warming and acid rains</p>				
	Harmful effects of burning fuel	<b>February 8</b>	Revision				
		<b>March</b>					Second Term Exam