

SCIENCE - PHYSICAL SCIENCE - STANDARD VIII - UNIT 1 - THE UNIVERSE - 8 PERIODS

Expected specific outcomes of learning	Content in Terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	No. of Periods allotted
1	2	3	4	5	6
Understands astronomical distances. Appreciates the vastness of galaxies and the universe.	1.1 Night sky-stars-stellar constellations - galaxies	Illustrates astronomical distances in terms of millions of kilometers and light year.	Explains, with charts, the sizes and shapes of galaxies, stellar constellations. Locates the solar system in milky way galaxy.	What is the difference between a satellite and a planet?	3
Recognizes and locates the planets of the solar system	1.2 Solar system, planets, moons, comets, meteors, meteorites.	Telescopic and binocular observation of moon and planets. Lists out the important comets and their features.	Examines the physical conditions of planets of the solar system. Collects the pictures and information about comets, meteors, and meteorites.	Name the planets of solar system. State any two differences between a star and a planet. What is the difference between meteors and meteorites?	3
Appreciates the importance of space exploration and artificial satellites.	1.3 Artificial satellites and their uses - communication, earth resources, meteorological, remote sensing and space exploration	Explains the role of space science in our national development. Tabulates some main events in Indian space program.	Prepares album on Indian satellites. Lists out the uses of artificial satellites in every day life. Collects materials on life and scientific contributions of Dr.A.P.J.Abdul Kalam.	Mention three uses of artificial satellites. Visit the Birla planetarium in Chennai / Trichy and write a report.	2

SCIENCE - PHYSICAL SCIENCE - STANDARD VIII - UNIT 2 - HYDROSTATICS - 10 PERIODS

1	2	3	4	5	6
Relates thrust and pressure to force. Differentiates thrust and force Understands atmospheric pressure and working of barometers	2.1 Thrust and Pressure 2.2 Pressure in fluids - atmospheric pressure - measurement - Fortin's and aneroid barometers	Explains thrust, pressure and relates them to force. Demonstrates air pressure and fluid pressure with U tube manometer connected to a funnel covered with a thin membrane	Calculates thrust, pressure and force in a water column. Attempts to measure lung pressure using an U tube manometer. Measures the pressure at a point in a liquid and analyses its variation with depth.	A brick measures 23 cm x 7.5 cm x 11 cm and its mass 2.75 kg. Calculate the three possible values of pressure it can exert on a surface. What is one atmospheric pressure?	2
Appreciates Archimedes' Principle and its applications	2.3 Archimedes' principle and its applications - density.	Verifies Archimedes' principle	Measures loss of weight of objects immersed in water	How will you find the density of cork using Archimedes' principle?	2
Understands the law of floatation	2.4 Laws of floatation - buoyant forces	Demonstrates the laws of floatation	Lists out different applications of Archimedes' principle Explains how Archimedes' principle is applied in the case of submarines.	State the laws of floatation. Explain the importance of Plimsoll lines.	2
Compares the densities of different liquids	2.5 Hare's apparatus	Demonstrates Hare's apparatus to compare the densities of liquids	Computes the densities of sugar, salt, copper sulfate solutions with Hare's apparatus.	The heights of water and kerosene columns in Hare's apparatus are 8 cm and 10 cm respectively. Calculate the density of kerosene.	2
Develops skills in devising hydrometers	2.6 Hydrometers - variable and constant immersion hydrometers	Demonstrates hydrometers to measure the R.D. of liquids	Devises simple hydrometers with test tube, straw and applies them to measure the R.D. of liquids.	Why is the stem of hydrometers small in diameter? State the uses of hydrometers.	2

SCIENCE - PHYSICAL SCIENCE - STANDARD VIII - UNIT 3 - AIR - 14 PERIODS

Expected specific outcome of Learning	Contents in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	No.of Periods allotted
1	2	3	4	5	6
Recalls characteristic features of the Atmosphere.	3.1. Air- Atmosphere	Presence of layer of gases around earth is explained	Diagram may be sketched to explain nature of atmosphere above the surface of earth	Explain the layer of atmosphere which contains air	1
Recalls the importance of air for breathing	3.2. Importance of air – breathing	Importance of molecular oxygen present in air for breathing in the case of all oxygenated animals on earth.	Simple experiments to demonstrate the presence of oxygen-Experimental set up for heating copper wire in a tube filled with air.	What is the importance of air for all living organisms?	1
Recalls constituents of air	3.3. Air as mixture	Air as a mixture of nitrogen, oxygen, Carbon dioxide, water vapour, Noble gases etc.	Composition varies with place to place depends on different activities. Air changes lime water milky - CO ₂ . Burning of paper-O ₂	Explain the presence of O ₂ and CO ₂ in air through Experiment.	1
Applies the knowledge of fractional distillation to separate the component mixtures of air	3.4. Separating the mixture of air	Separation of mixture of gases by fractional distillation - composition is given	Schematic Representation	Mention the method from which oxygen is obtained from air.	2

1	2	3	4	5	6
Recalls presence of nitrogen in air and its application	3.5.Importance of nitrogen for all forms of life	Protection of all living things from combustion	To prove nitrogen as non-supporter of combustion	In what way nitrogen present in air protects the objects from burning.	1
Analyses nitrogen cycle	3.5.1. Brief note about nitrogen Cycle	The method of conversion of atmospheric nitrogen into various nitrogen compounds in nature can be explained.	Schematic diagram	In what way nitrogen is essential to be coined as building blocks of life.	2
Analyses the causes for air pollution.	3.6.Air Pollution	Causes for pollution are listed- industrial waste like smoke pollution due to vehicles etc.	Diagram to show air pollution.	How atmospheric air is polluted?	2
Adopts measures to prevent air pollution	3.7 Prevention of air pollution	Treatment of smoke In industries-smoke Test for vehicles. Restriction in use of fossil fuels preventing the burning of plastics.	Suitable diagrams.	Mention briefly general methods of prevention of air pollution.	2
Analyses about green house effect and acid rain	3.8. Green house effect. 3.9.Acid rain	Intake of oxygen and discharge of carbon-di-oxide	Schematic diagram of green house Effect and acid rain	Explain the role of plants to provide oxygen to air. How industrial pollution causes acid rain.	2

SCIENCE - PHYSICAL SCIENCE - STANDARD VIII - UNIT 4 - TRANSFORMATION OF SUBSTANCES - 15 PERIODS

Expected Specific Outcome Of Learning	Contents In Terms Of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	No.of Periods Alloted
? Recalls physical change and chemical change	4.Transformation of substances 4.1. Phase change and chemical change	Physical change can be explained through experiments	Experiments to show melting, boiling and sublimation etc., ice ? Water ? stream Burning of iodine or camphor.	How would you prove that burning of camphor is a physical change?	1
? Recognizes conditions for chemical change	Characteristics of chemical reactions	Importance of chemical reactions such as reversibility and irreversibility	Burning of magnesium ribbon Formation of curd from milk	How burning of magnesium is characterized as a chemical change?	1
? Recognizes various forms of visible changes to confirm chemical changes.	4.3. Condition for chemical reactions	Burning of barium Nitrate to identify the evolution of colour of the gas evolved.	Heating of hydrated copper sulphate to prove change of colour. Adding of silver nitrate to solution containing chloride.	Explain any experiments to prove some chemical reactions are exothermic and some chemical reactions are endothermic?	2
	4.4 Methods of identifying chemical reactions by analyzing evolution of gas, change of colour, formation of precipitate energy change and change of state.	Strategies to explain to test the evolution of gas through the formation of precipitate and heat evolving change and heat absorbing change.	Dissolving dry lime in water to prove exothermic reaction. Dissolving sodium nitrate in water to show endothermic reaction.		1
? Recognizes the need for purifying the substances.	4.5. Purification of substances.	Importance of purification of chemical substances for conducting any chemical change.			1

?	Recalls various methods suitable for distillation of substances.	4.6. Distillation	Method of conversion of liquid into vapour and vapour into liquid. Importance of distillation to purify any liquid.	Schematic diagram for distillation of liquid mixture.	How ethanol can be separated from water?	1
?	Sees the importance of melting and boiling points of pure substances.	4.7. Important physical properties of a substances. 4.7.1. Melting and boiling point .	Experiments to find out boiling point of water or any low boiling liquid.	Experimental setup to show melting point and boiling point of the pure substances.	How will you identify the purity of a substance through boiling point and melting point?	1
?	Recognizes the different types of chemical reactions	4.8. Types of chemical reactions. 4.8.1. Decomposition 4.8.2. Displacement 4.8.3. Neutralization 4.8.4. Oxidation, Reduction	Decomposition of a substance that undergoes a chemical change and evolution of gas. Importance of Displacement reactions to displace an element from its compounds. Reaction between acid and base and it's importance to produce a salt should be emphasized. Methods to remove Hydrogen or addition of Hydrogen and Vice-versa should be explained.	Heating of Lead nitrate or Calcium carbonate. Zinc + Copper sulphate reaction Schematic diagram of formation of different salts in sea water. Schematic diagram of Oxidation and Reduction with specific examples like formation of Hydrogen from Hydrogen chloride Rusting of Iron	Why heating of Lead nitrate belongs to chemical decomposition? How Copper is displaced from Copper sulphate solutions? In what way acid base reaction is important to human life? Explain Oxidation and Reduction with suitable examples.	1 2 2 2

SCIENCE – PHYSICAL SCIENCE - STANDARD VIII - UNIT 5 - ATOMIC STRUCTURE - 12 PERIODS

Expected specific outcome of Learning	Contents in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	No.of Periods Alloted
1	2	3	4	5	6
Recognises building blocks of matter	5.1. Atoms	Importance of Atoms in all forms of matter should be Explained	Schematic diagram of structure of atom showing the position of electron protons and neutrons in an atom.	What are the ultimate and tiniest particles of matter?	1
	5.2. Neutral character of atom.	Emphasis should be made to explain that atom is constituted by +ve and -ve particles and thereby explains neutral character of atom.		How can you conclude that atom is electrically neutral ?	1
Analysies various sub atomic particles	5.3.Composition of atom. 5.3.1. Electron 5.3.2. Proton 5.3.3. Neutron	Properties like Charge, mass of Electron, proton and neutron	Chart showing Properties of Electron,proton and neutron.	Name the three fundamental particles of atom and give their relative chargesand masses.	1
Recognises three important fundamental particles of atom	5.4 Structure of Atom 5.4.1 Nuclear Part 5.4.2 Extra nuclear part	Nature of nucleus and the nature of Extra nuclear part Can be explained by simple teaching Methodology	Showing diagrammatic representation-Nuclear and extra nuclear part of an atom	How are three fundamental particles of atoms are arranged in an atom ?.	1

1	2	3	4	5	6
Recognises historical development of structure of atom	5.5. Model of an Atom 5.5.1. Dalton model 5.5.2 J.J.Thomson model	Historical methods of atom should be explained sequence by sequence	Diagrammatic & Labelled sketches of Dalton, thomson Models of atom	In what way Thomson's model differs from Dalton's model ?	2
Recognises the nature of atom through their atomic number & mass number	5.6.1. Atomic Number 5.6.2. Mass Number 5.6.3 Meaning of Isotope	Importance of Atomic number Should be explained. Use of Isotopes Should be briefly Impressed.	Chart of elements Showing atomic number and Isotopes	How do you determine number of Proton, Electrons & Neutrons in atoms?	2
Recognises particles present in an atom	5.7. Composition of atom of the first twenty elements	Calculation of number of Protons, electrons & neutrons from Atomic number & mass number should be explained	Chart showing the number of protons electrons & neutrons should be prepared and exhibited.	Calculate no. of Protons, electrons and neutrons in a) Hydrogen Atom b) Helium Atom c) Carbon Atom d) Nitrogen Atom	2
	5.8.Valency -Meaning of combining capacity	Valency of chlorine, oxygen, nitrogen, carbon can be explained choosing Hydrogen as a standard	Simple equations showing combining capacity	Show that chlorine is monovalent, oxygen is divalent and Nitrogen is trivalent	2

SCIENCE - PHYSICAL SCIENCE - STANDARD VIII - UNIT 6 - METALS AND NON-METALS - 12 PERIODS

Expected Specific Outcome Of Learning	Contents In Terms Of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	No.of Periods allotted
<p>Recognizes the earliest separation of elements in to metals and non-metals.</p> <p>Analyses the important characteristics of metals and non-metals</p>	<p>6. Metals and non-metals</p> <p>6.1 Characteristics of Metals and Non-metals.</p> <p>6.1.1 Physical properties.</p> <p>6.1.2 Chemical properties.</p>	<p>Physical properties of metal like heaviness, shining, hardness and conductor of heat and electricity should be explained.</p> <p>Chemical properties: Dissolution of metals in acid Combustion of carbon & phosphorus</p>	<p>Showing the available metals like Iron, Aluminum and non-metals like Carbon (Coal and Graphite can be exhibited) and thereby explaining the properties of metals and non-metals.</p>	<p>Distinguish between metals and non-metals</p> <p>Describe any two physical properties and chemical properties of metals and non-metals</p>	3
<p>Recognizes the importance of metals and non-metals in day-to-day life.</p>	<p>6.2 Uses of metals and non-metals.</p>	<p>Emphasize the uses of Iron, Aluminum, and Copper, Tin (Tinning of cooking utensils) in day-to-day life. Use of carbon, silicon & phosphorus.</p>		<p>Mention the important uses of Aluminum and Iron Mention any one chemical property of carbon & phosphorus.</p>	1
<p>Recognizes the inactivity of certain metal towards atmosphere and heating</p>	<p>6.3 Noble metals and their uses.</p> <p>6.3.1. Malleability and Ductility of Noble metals.</p>	<p>Rational explanation of inactivity of Gold and Platinum. Action of silver utensils in air.</p> <p>Importance of making ornaments using noble metals should be explained.</p>	<p>Dissolution of Zinc in dilute acids can be explained.</p>	<p>Why metals like Gold are considered to be noble?</p> <p>Why Gold is mainly chosen for making ornaments?</p>	2

Recognizes the change in property of a metal in a mixture of metals and non-metals.	6.4 Alloys	Importance of Alloys Like Bronze, ornamental Gold, and Brass in day-to-day life.	Exhibition of certain ornaments and Alloys like Steel	What are Alloys? Mention their uses.	2
Recognizes the purity of Gold in Gold ornaments	6.5 Purity of Gold	Meaning of “Carat” should be explained	Pure gold 24 Carat ornamental gold varies from 22 – 18 carat.	Explain the differences between pure Gold and Ornamental Gold	1
Recognizes the corroding of materials of Iron in air	6.6 Corrosion (Iron) and its prevention	Difference between Rusting and Corrosion of the Iron and Steel should be explained. Importance of Corrosion as a chemical change exposed to surroundings should be explained.	Placing Iron nails in half filled water in a beaker and adds a slight amount of Sodium chloride to it. Rusting of Iron can be shown.	What is Corrosion? In what way it can be prevented?	3

SCIENCE - PHYSICAL SCIENCE - STANDARD VIII - UNIT 7 - CARBON - 15 PERIODS

Expected specific Outcome Of Learning	Content In Terms Of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	No.of Periods Alloted
? Recognizes carbon atom as a back bone of organic compounds	7. Carbon 7.1. Carbon in earth's crust	Nature of carbon in various forms of life should be emphasized	Carbon as a back bone of animals and plants through schematic diagram	In what way is carbon very much important?	2
? Recalls about Atmosphere	7.2 Atmosphere & living organism	Atmosphere, surrounding earth surface should be explained, composition of air such as Nitrogen, carbon dioxide, oxygen should be explained. Carbon in the form various food items. Ex. Carbohydrates, proteins, vitamins etc., should be emphasized.	Schematic diagram explaining the nature of atmosphere and its various regions should be exhibited.	Where living organisms live on earth's zone? What is the composition of dry air?	2
? Recognizes the existence of allotropes of carbon.	7.3 Allotropy 7.3.1. Graphite, diamond-Structure. 7.3.2. Graphite, diamond – properties and uses.	Differences between diamond and graphite should be explained. Soft and hard nature of graphite and diamond colour & conductivity of the graphite and diamond are emphasized. Graphite is an electrode and diamond for ornaments should be explained.	Diagramatic representation of the structure of graphite and diamond. Uses of graphite and diamond	In what way the graphite is chosen as a lubricant? Why diamond is very hard? Explain the structural differences between graphite & diamond.	6

Recognizes the existence of Fullerenes	7.4. Fullerenes – Nature of carbon	Fundamental concept of fullerenes and its nature should be emphasised Buckminster Fullerenes C_{60} . Importance of fullerenes to make diamond	Schematic diagram of fullerenes explaining cage structure.	What are fullerenes? Explain its significance.	2
Analyzes the role of carbon dioxide in photosynthesis and in “green house effect”.	7.5. Carbon dioxide 7.5.1. preparation of carbon dioxide 7.5.2. Properties of carbon dioxide. 7.5.3. Uses of carbon dioxide.	Simple method to prepare carbon dioxide by heating lime stone or action of acid on carbonates. Acidic properties- reaction with calcium hydroxide should be explained. Dry ice as a refrigerant and fire extinguisher.	Discharge of carbon dioxide by breathing by oxygenated animals and absorption of carbon dioxide by the plants.	How is carbon dioxide prepared? Explain its importance in maintaining earth temperature? Why the product obtained in the reaction between carbondioxide and calcium hydroxide is white? Name the compound that is formed. What is the acid that is formed when carbon dioxide is dissolved in water? Which is called as ‘dry ice’?	2
Recognizes the importance of methane as a natural gas.	7.6. Methane	Importance of methane as a fuel.	The constituents of Natural gas should be explained.	What is marsh gas? Mention its uses.	1

SCIENCE - PHYSICAL SCIENCE - STANDARD VIII - UNIT 8 - CENTRE OF GRAVITY & SIMPLE MACHINES & FRICTION - 10 PERIODS

1	2	3	4	5	6
Understands Centre of gravity of a body	8.1 Centre of gravity	Defines and explains the centre of gravity of a body.	Locates the CG of a metre scale / rod.	Define centre gravity of an object	1
Identifies the centre of gravity of regular and irregular bodies	8.2 Centre of gravity of regular and irregular objects	Explains the methods to find C.G of regular lamina. Square, rectangular, triangular circular, uniform rod, disc, sphere hollow sphere, cone.	Experiments to determine the CG of irregularly shaped lamina (card board)	Where is the centre of gravity of two identical cones joined together at the base ?	1
Recognizes the factors that affects equilibrium	8.3 Stability of equilibrium	Demonstrates the three conditions of the stability of a prism / solid cone	Lists out some examples of stability of objects (Pisa tower, Tanjore doll)	Why do race cars are low and their wheels apart?	1
	8.4 Stable and Unstable equilibrium	Explains the factors required for stability of equilibrium	Diagrammatically explains stable and unstable equilibrium	Passengers are not allowed to stand in a boat / upper deck of a bus - Why ?	1
Understands and appreciates the role of friction	8.5 Friction :- factors affecting friction - sliding and rolling friction. Examples of advantages and disadvantages of friction - control of friction.	Demonstrates advantages and disadvantages of sliding and rolling friction. Explains methods of control of friction.	Investigates the factors that affect friction. Lists out the examples where friction is advantageous and disadvantageous	Why do we use ball bearings in wheels? Give examples where friction is essential. How can we control friction?	2

1	2	3	4	5	6
Understands simple machines and appreciates their uses	8.6 Simple machines - levers - types	Explains and defines efficiency, mechanical advantage and velocity ratio.	Gives examples of three classes of levers.	Explain the three classes of levers. Calculate the efficiency of these machines M.A. V.R. Efficiency 4 8 ? 2 8 ? 5 5 ?	2
Appreciates the role of pulleys in daily life.	8.7 Pulleys (Single, movable and block of pulley)	Explains the pulley system and calculates its mechanical advantage.	Illustrates block of pulleys used in lifts and cranes.	Define the terms M.A., V.R. and efficiency of simple machines	1
Understands the need for inclined plane	8.8 Inclined plane	Explains uses of inclined planes with examples.	Draws labelled diagram of pulley and inclined plane.	Give examples of inclined plane and explain how they make our task easier.	1

SCIENCE - PHYSICAL SCIENCE - STANDARD VIII - UNIT 9 - LIGHT - 14 PERIODS

1	2	3	4	5	6
Understands bending of light when it travels from one medium to another	9.1 Refraction of light through a glass slab and prism	Observes lateral refraction of light through a glass slab/prism using pin method	Draws the path of the ray inside glass slab / prism	Why objects in water appear to be at a lower depth?	2
Recognizes that light travels with different velocities in different media	9.2 Velocity of light in different media - refractive index	Explains refraction of light in terms of change in velocity as it enters another medium	Calculates the velocity of light in water, glass and kerosene with known values of refractive index	Calculate the velocity of light in glass of refractive index 1.5	2
Appreciates that white light consists of seven colours	9.3 Dispersion of white light through a prism	Demonstrates the dispersion of white light by a prism and observes the different colours of white light	Uses (1) a prism and (2) an inclined plane in a water tank to observe dispersion of sun light	Explain why violet colour gets deviated the most in dispersion of white light by a prism.	2
Appreciates the applications of bending of light by lenses	9.4 Spherical lenses - convex and concave - converging and diverging action - focal point, focal length. Image formed by lenses for different positions of an object	Demonstrates that convex lens is a converging lens and a concave lens is a diverging lens. Identifies the focal point and focal length of lenses. Demonstrates the images formed for different positions of object using a convex lens.	Forms images using convex lens and measures the focal length. Observes the image of an object using a concave lens. Tabulates the nature of images formed by a convex lens for different positions of the object.	Why is it unwise to look at the sun? Why is it unwise to leave glass bottles in a forest?	2

1	2	3	4	5	6
Appreciates the use of lenses to magnify objects, record images and see distant objects.	9.5 Application of lenses - magnifying glass, compound microscope, camera, telescope	Demonstrates simple arrangement of two convex lenses to form a compound microscope and a telescope	Explores the image formation in a camera.	What is the nature of images formed by a telescope and a microscope?	2
Understands the working of human eye	9.6 Human eye	Demonstrates the working of an eye with a round bottomed flask filled with water and lighted spot and screen.	Draws the structure of human eye and identifies the functions of different parts	Why do the eyes of animals such as cats and cattle sparkle in the night?	2
Applies the knowledge of lenses for practical applications	9.7 Defects of vision and their corrections	Explains the defects of eye and corrections using lenses with models and diagrams	Compares the eye and the camera and makes a list of similarities and differences	What causes short sight and long sight? How are they rectified?	2

SCIENCE - PHYSICAL SCIENCE - STANDARD VIII - UNIT 10 - MAGNETISM AND ELECTRICITY - 12 PERIODS

1	2	3	4	5	6
<p>Distinguishes magnetic and non - magnetic materials</p> <p>Identifies poles of a bar magnet.</p>	<p>10.1 Magnetism - lode stone-bar magnet - properties of magnet-magnetic compass.</p>	<p>Demonstrates magnetic and non-magnetic materials.</p> <p>Locates the poles of a bar magnet</p> <p>Explains the attractive and repulsive forces between the poles of magnet.</p>	<p>Tests for magnetic and non-magnetic materials.</p> <p>Experiments with the force between the poles of magnets.</p>	<p>How would you distinguish between a magnetic and non-magnetic substance?</p> <p>Name three magnetic materials.</p>	2
<p>Appreciates how the earth acts as a magnet</p> <p>Tests the magnetic properties using a bar magnet.</p> <p>Develops skills in making magnets.</p>	<p>10.2 Magnetic induction - methods of magnetization - stroking method and electrical method.</p>	<p>Explains the earth's magnetism - dip and declination.</p> <p>Demonstrates magnetization by stroking and electrical methods.</p>	<p>Makes a magnet by stroking an iron piece and tests for magnetic poles.</p>	<p>Name the material used for making temporary magnets.</p> <p>What is meant by induced magnetism?</p> <p>How will you make a simple electromagnet?</p>	2
<p>Learns that hammering, heating and passing AC destroys magnetism.</p>	<p>Methods of demagnetization – hammering - heating.</p>	<p>Demonstrates demagnetization by hammering and heating.</p>	<p>Heat and hammer a bar magnet and test for loss of magnetism.</p>	<p>At what temperature iron loses its magnetism?</p>	2
<p>Appreciates the presence of magnetic lines of force</p>	<p>10.3 Molecular theory of magnetism - Magnetic lines of force.</p>	<p>Demonstrates the magnetic field of a bar magnet with iron filings and compass.</p>	<p>Traces the magnetic field lines around a bar magnet.</p>	<p>Explain why a suspended bar magnet points in the north-south direction.</p>	2

1	2	3	4	5	6
<p>Develops skills in designing simple circuits.</p> <p>Appreciates the uses of series and parallel circuits.</p>	<p>10.4 Simple electric circuits. Series and parallel circuits.</p>	<p>Demonstrates electric circuits with a cell, switch, and bulb / bell. Uses it to identify conductors and insulators.</p> <p>Demonstrates series and parallel circuits with cells and bulbs.</p>	<p>Designs simple circuits with dry cells.</p> <p>Tabulates conductors and insulators.</p> <p>Explains the uses of parallel circuits</p>	<p>What is an electric circuit ?</p> <p>Name any three good conductors of electricity.</p> <p>What type of electric circuit is used in houses?</p>	2
<p>Recognizes magnetic effects of current</p> <p>Appreciates the applications of electromagnets</p>	<p>10.5 Magnetic properties of current carrying conductors - Oersted's experiment</p> <p>Electromagnets and their uses</p>	<p>Demonstrates magnetic field produced by straight wire and circular coil carrying current.</p> <p>Explores the direction magnetic field around a straight wire carrying current.</p> <p>Displays the working of electromagnets with simple devices - electric bell and buzzer</p>	<p>Understands the right-hand thumb rule giving the direction of magnetic field lines.</p> <p>Devises a simple electric bell.</p> <p>Tabulates the uses of electromagnets.</p>	<p>How will you identify the magnetic field around a current carrying conductor?</p> <p>Explain the working of an electric bell.</p> <p>Give one application of electromagnet.</p>	2
<p>Observes the conversion of energy through electro-magnetic induction.</p>	<p>10.6 Electromagnetic induction.</p>	<p>Demonstrates induced current with a coil of wire and a bar magnet.</p>	<p>Explores the change in direction of current induced in a coil by changing the poles and direction of movement of magnet.</p>	<p>What is electro-magnetic induction?</p> <p>Who discovered electromagnetic induction?</p>	1

SCIENCE - PHYSICAL SCIENCE - STANDARD VIII - UNIT 11 - SOURCES OF ENERGY - 6 PERIODS

1	2	3	4	5	6
Appreciates the sources of energy and their conversions.	11.1 Solar energy, wind energy.	Explains the production of energy in the sun and its conversion into wind and hydro electric energy.	Collects pictures and reports on solar water heater, cooker, and photo voltaic cell. Makes models of a windmill.	How is energy produced in the sun? Where in Tamil Nadu are the wind mills located?	2
Understands hydroelectric power generation	11.2 Hydro-electric energy	Demonstrates the conversion of mechanical energy using Faraday's experiment, bicycle dynamo.	Lists out hydro electric power stations in Tamil Nadu and identifies the conversion of energy.	State three each of hydroelectric and thermal power stations in Tamil Nadu.	2
Appreciates the need for nuclear energy	11.3 Nuclear energy	Explains the production of nuclear energy.	Collects pictures and reports on Indian nuclear energy project.	Where in Tamil Nadu nuclear power station is located?	2