

DIRECTORATE OF EDUCATION, GNCT of Delhi
ANNUAL SYLLABUS (2026-27)

CLASS: 8, SUBJECT: SCIENCE

BOOK: CURIOSITY

Science Education aims to achieve Scientific understanding of the natural and physical world; Capacities for scientific inquiry; Understanding the evolution of scientific knowledge; Interdisciplinary understanding between science and other curricular areas; Understanding of the relationship between Science, Technology and, Society; Scientific temper and Creativity.

The present syllabus has been designed around seven broad themes viz. Food; Materials; The World of the Living; How Things Work; Moving Things, People and Ideas; Natural Phenomenon and Natural Resources.

In the Middle Stage, Science is taught using integrated approach. This integrated approach develops fundamental capacities related to the disciplines of Biology, Chemistry, Physics, and Earth Science while the use of connections across them helps students appreciate the interrelations between these subjects and make sense of their observations and experiences.

At all Stages, along with conceptual understanding, the capacities of scientific inquiry are developed as age appropriate. These concepts and capacities are chosen both from a disciplinary perspective and in terms of what is useful and necessary in their everyday lives. Students thereby understand the world around them with increasing depth, explore scientific questions at different levels through discussion and experimentation, and learn to communicate this understanding in different ways.

The Learning Standards (Curricular Goals and Competencies) for Science as an integrated curricular area, in alignment with the National Curriculum Framework 2023 are as follows:

Curricular Goals	Competencies
<p>CG-1: Explores the world of matter and its constituents, properties, and behaviour</p>	<p>C-1.1 Classifies matter based on observable physical (solid, liquid, gas, shape, volume, density, transparent, opaque, translucent, magnetic, non-magnetic, conducting, non-conducting) and chemical (pure, impure; acid, base; metal, non-metal; element, compound) characteristics</p> <p>C-1.2 Describes changes in matter (physical and chemical) and uses particulate nature to represent the properties of matter and the changes</p> <p>C-1.3 Explains the importance of measurement and measures physical properties of matter (such as volume, weight, temperature, density) in indigenous, non-standard and standard units using simple instruments</p> <p>C-1.4 Observes and explains the phenomena caused due to differences in pressure, temperature, and density (e.g., breathing, sinking-floating, water pumps in homes, cooling of things, formation of winds)</p>

Curricular Goals	Competencies
<p>CG-2: Explores the physical world in scientific and mathematical terms</p>	<p>C-2.1 Describes one-dimensional motion (uniform, non-uniform, horizontal, vertical) using physical measurements (position, speed, and changes in speed) through mathematical and diagrammatic representations</p> <p>C-2.2 Describes how electricity works through manipulating different elements in simple circuits and demonstrates the heating and magnetic effects of electricity</p> <p>C-2.3 Describes the properties of a magnet (natural and artificial; Earth as a magnet)</p> <p>C-2.4 Demonstrates rectilinear propagation of light from different sources (natural, artificial, reflecting surfaces), verifies the laws of reflection through manipulation of light sources and objects and the use of apparatus and artefacts (such as plane and curved mirrors, pinhole camera, kaleidoscope, periscope)</p> <p>C-2.5 Observes and identifies celestial objects (stars, planets, natural and artificial satellites, constellations, comets) in the night sky using a simple telescope and images/photographs, and explains their role in navigation, calendars, and</p>

	other phenomena (phases of the moon, eclipse, life on earth)
CG-3: Explores the living world in scientific terms	<p>C-3.1 Describes the diversity of living things observed in the natural surroundings (insects, earthworms, snails, birds, mammals, reptiles, spiders, diverse plants, and fungi), including at a smaller scale (microscopic organisms)</p> <p>C-3.2 Distinguishes the characteristics of living organisms (need for nutrition, growth and development, need for respiration, response to stimuli, reproduction, excretion, cellular organisation) from non-living things</p> <p>C-3.3 Analyses patterns of relationships between living organisms and their environments in terms of dependence on and response to each other</p> <p>C-3.4 Explains the conditions suitable for sustaining life on Earth and other planets (atmosphere; suitable temperature-pressure, light; properties of water)</p>
CG-4: Understands the components of health, hygiene,	C-4.1 Undertakes a nutrition-based analysis of food components with special reference to Indian culinary practices and modern understanding of nutrition, and explains the effect of nutrition on

and well-being	<p>health</p> <p>C-4.2 Examines different dimensions of diversity of food — sources, nutrients, climatic conditions, diets</p> <p>C-4.3 Describes biological changes (growth, hormonal) during adolescence, and measures to ensure overall well-being</p> <p>C-4.4 Recognises and discusses substance abuse, viewing school as a safe space to raise these concerns</p>
CG-5: Understands the interface of Science, Technology, and Society	<p>C-5.1 Illustrates how Science and Technology can help to improve the quality of human life (health care, communication, transportation, food security, mitigation of climate change, judicious consumption of resources, applications of artificial satellites) as well as some of the harmful uses of science in history</p> <p>C-5.2 Shares views on news and articles related to the impact that Science/Technology and society have on each other</p>
CG-6: Explores the nature and processes of	C-6.1 Illustrates how scientific knowledge and ideas have changed over time (description of motion of objects and planets, spontaneous generation of life, number of planets) and identifies the scientific values that are inherent

Science through engaging with the evolution of scientific knowledge and conducting scientific inquiry	and common across the evolution of scientific knowledge (scientific temper, Science as a collective endeavour, conserving biodiversity and ecosystems) C-6.2 Formulates questions using scientific terminology (to identify possible causes for an event, patterns, or behaviour of objects) and collects data as evidence (through observation of the natural environment, design of simple experiments, or use of simple scientific instruments)
CG-7: Communicates questions, observations, and conclusions related to Science	C-7.1 Uses scientific vocabulary to communicate Science accurately in oral and written form, and through visual representation C-7.2 Designs and builds simple models to demonstrate scientific concepts C-7.3 Represents real world events and relationships through diagrams and simple mathematical representations
CG-8: Understands and appreciates the contribution	C-8.1 Knows and explains the significant contributions of India to all matters (concepts, explanations, methods) that are studied within the curriculum in an integrated manner

of India through history and the present times to the overall field of Science, including the disciplines that constitute it	
CG-9: Develops awareness of the most current discoveries, ideas, and frontiers in all areas of scientific knowledge	C-9.1 States concepts that represent the most current understanding of the matter being studied — ranging from mere familiarity to conceptual understanding appropriate to the developmental stage C-9.2 States questions related to matters in the curriculum for which current scientific understanding is well-recognised to be inadequate

It is important to note that the Curricular Goals are interdependent, and not separate curricular pieces of study.

(Reference: National Curriculum Framework for School Education – 2023.)

THEME	CONTENT	SUGGESTIVE LEARNING OUTCOMES	ACTIVITIES
How Things Work	Ch-1: Exploring the Investigative World of Science	<p>The learner</p> <ul style="list-style-type: none"> • Frames scientific questions from everyday observations and situations. • Plans simple investigations/experiments by identifying variables to change and observe. • Differentiates between controllable variables and measurable outcomes in an experiment. • Records and interprets observations systematically to draw logical explanations. 	<ul style="list-style-type: none"> • Students write their own science questions based on daily life observations. • Investigate why puri puffs unevenly. • Change one variable at a time (thickness, flour type, oil temperature, dropping method). • Observe puffing, time taken, thickness difference. • List what can be controlled vs what can be measured in an experiment. • Maintain notes of smell, splatter, puffing behaviour, time taken, texture differences.
The World of the Living	Ch-2 : The Invisible Living World: Beyond Our Naked Eye	<ul style="list-style-type: none"> • Explains that cell is the basic unit of life and describes main parts of the cell. • Differentiates between plant cells, animal cells, and bacterial cells based on structure and key features. • Describes microorganisms and classifies them. Explains beneficial roles of 	<ul style="list-style-type: none"> • 2.1 — Flask as magnifier to observe enlarged letters / small objects. • 2.2 :Onion peel slide preparation and microscopic observation. • 2.3; Human cheek cell slide preparation and observation. • 2.4 :Observe pond/stagnant water under microscope/foldscope. • 2.5:Observe soil suspension under microscope. • 2.6: Identify microorganisms using

		microorganisms in daily life .	<p>observation tables.</p> <ul style="list-style-type: none"> • 2.7 :Compost formation using fruit & vegetable peels. • 2.8: Yeast dough fermentation experiment. • 2.9: Curd formation using warm vs cold milk.
The World of the Living	Ch-3: Health: The Ultimate Treasure	<ul style="list-style-type: none"> • Explains the meaning of health as physical, mental, and social well-being and identifies factors that influence good health. • Differentiates between communicable and non-communicable diseases with causes and examples. • Describes how communicable diseases spread and states preventive measures such as hygiene, sanitation, and vector control. • Explains the role of immunity, vaccination, and responsible use of antibiotics in disease prevention and control. 	<ul style="list-style-type: none"> • 3.1 : Case study on student health and screen time; think & reflect questions. • 3.2: List healthy and unhealthy habits from daily life. • 3.3 : Compare two playgrounds to relate cleanliness with health. • 3.4: Verify and complete a table of communicable diseases, causes, and prevention. • 3.5: Survey common lifestyle diseases in the neighbourhood and suggest lifestyle changes. • 3.6 : Community sanitation campaign case study and inference. • 3.7 : Study infographic on antibiotic resistance and suggest precautions.
How Things Work	Ch-4: Electricity: Magnetic and Heating Effects	<ul style="list-style-type: none"> • Explains the magnetic effect of electric current and shows that a current-carrying wire produces a magnetic field. • Constructs and explains an electromagnet and describes factors affecting its strength (number of turns, current, iron 	<ul style="list-style-type: none"> • 4.1 :Compass deflection experiment to show magnetic effect of current. • 4.2 : Making a simple electromagnet using nail and coil. • 4.3 : Cylindrical coil electromagnet with compass and iron core. • 4.4 : Finding poles of an electromagnet using a compass.

		<p>core).</p> <ul style="list-style-type: none"> • Explains the heating effect of electric current and relates it to working of household heating appliances. • Describes how cells and batteries generate electricity and differentiates between dry cells and rechargeable batteries. 	<ul style="list-style-type: none"> • 4.5 : Testing effect of number of cells and coil turns on electromagnet strength. • 4.6 : Nichrome wire setup to demonstrate heating effect of current. • 4.7 : Comparing heating with one cell and two cells. • 4.8 : Lemon cell (voltaic cell) to glow an LED.
<p>Moving Things, People and Ideas</p>	<p>Ch-5: Exploring Forces</p>	<ul style="list-style-type: none"> • Defines force as a push or pull and explains that force arises due to interaction between objects. • Describes effects of force such as change in speed, direction of motion, and shape of objects. • Differentiates between contact and non-contact forces with examples (muscular, frictional, magnetic, electrostatic, gravitational). • Explains gravitational force and weight and measures weight using a spring balance. 	<ul style="list-style-type: none"> • 5.1 : Moving a cardboard box using push and pull • 5.2 : Listing situations of force and their effects • 5.3 : Sliding object on surface to observe friction • 5.4 : Comparing friction on different surfaces • 5.5 : Ring magnets attraction–repulsion setup • 5.6 : Charged plastic scale attracting paper bits • 5.7 : Charged balloons attraction and repulsion • 5.8 : Throwing a ball upward and motion under gravity • 5.9 : Spring stretch with different objects (weight effect) • 5.10 : Studying spring balance scale and range • 5.11 : Finding least count of spring balance • 5.12 : Measuring weight using spring balance • 5.13 : Upthrust and floating bottle in water.

<p>Natural Phenomena</p>	<p>Ch-6: Pressure, Winds, Storms, and Cyclones</p>	<ul style="list-style-type: none"> • Explains pressure as force acting per unit area and relates pressure with area of contact. • Describes pressure in liquids and gases and states that fluid pressure acts in all directions and increases with depth. • Explains how differences in air pressure produce winds including land breeze and sea breeze. • Describes formation and effects of storms and cyclones and states basic safety and preparedness measures. 	<ul style="list-style-type: none"> • 6.1 : Thumbtack and pressure on different areas • 6.2 : Balloon burst with pin vs blunt stick comparison • 6.3 : Bottle with holes showing liquid pressure at depth • 6.4 : Inverted glass and card experiment (air pressure) • 6.5 : Crushing can experiment using heating and cooling • 6.6 : Paper strip and blowing air demonstration • 6.7 : Two hanging balloons attraction experiment • 6.8 : Heating air to show expansion and upward movement • 6.9 : Model setup to demonstrate land and sea breeze • 6.10: Cyclone safety planning and preparedness task
<p>Materials</p>	<p>Ch-7: Particulate Nature of Matter</p>	<ul style="list-style-type: none"> • Explains that matter is made up of extremely small particles and gives evidence using dissolution and diffusion examples. • Describes interparticle space and interparticle attraction and relates them to solids, liquids, and gases. • Differentiates between solid, liquid, and gaseous states based on particle arrangement, motion, and compressibility. • Explains the effect of heat and pressure on particle motion and relates it to melting, boiling, 	<ul style="list-style-type: none"> •7.1 : Breaking and grinding chalk to observe smaller particles •7.2 : Dissolving sugar in water and tasting top layer •7.3 : Comparing solid objects and hammering to infer particle packing •7.4 : Pouring water into different shaped containers to study liquid shape and volume •7.5 : Smoke spreading between gas jars / iodine vapour spreading •7.6 : Compressing air in a syringe to show gas compressibility •7.7 : Dissolving sugar in water and comparing water levels •7.8 : Potassium permanganate spreading

		evaporation, and compression.	in water (diffusion) ●7.9 : Incense stick fragrance spreading in a room (gas particle motion)
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Note:-

- ❖ **The above mentioned syllabus is to be completed by September 5, 2026.**
- ❖ **Revision of syllabus for Mid Term Examination.**

MID TERM EXAM

THEME	CONTENT	SUGGESTIVE LEARNING OUTCOMES	ACTIVITIES
Materials	Ch-8: Nature of Matter: Elements, Compounds and Mixtures	<ul style="list-style-type: none"> • Classifies substances as elements, compounds and mixtures based on composition and properties. • Differentiates between metals, non-metals and metalloids using physical and chemical characteristics. • Explains the difference between compounds and mixtures with suitable examples from daily life. • Describes simple methods of separating mixtures based on differences in properties. 	<ul style="list-style-type: none"> ●8.1 : Observing and grouping common substances based on properties ●8.2 : Testing metallic and non-metallic properties (lustre, conductivity, malleability) ●8.3 : Heating substances to observe physical vs chemical change ●8.4 : Preparing and observing a simple mixture of solids ●8.5 : Separating mixture using handpicking and sieving ●8.6 : Sedimentation and decantation setup ●8.7 : Filtration using filter paper ●8.8 : Evaporation to recover dissolved solid
	Ch-9: The Amazing World of	<ul style="list-style-type: none"> • Defines solute, solvent, and solution and distinguishes between uniform and non-uniform mixtures. • Explains saturated and unsaturated solutions and 	<ul style="list-style-type: none"> ●9.1 :Dissolving salt in water to identify saturation limit ●9.2 :Heating baking soda solution to study effect of temperature on solubility ●9.3 : Measuring mass using a digital weighing balance

Materials	Solutes, Solvents and Solutions	<p>solubility and relates them to temperature.</p> <ul style="list-style-type: none"> • Describes factors affecting solubility of solids and gases in liquids with examples. • Calculates density using mass and volume and predicts whether an object floats or sinks. 	<ul style="list-style-type: none"> •9.4 : Observing and calculating least count of measuring cylinder •9.5 : Measuring fixed volume of water using measuring cylinder and meniscus reading •9.6 : Calculating volume of regular solids using dimensions •9.7 :Measuring volume of irregular solids by water displacement
How Things Work	Ch-10: Light: Mirrors and Lenses	<ul style="list-style-type: none"> • Identifies the differences between plane, concave, and convex mirrors based on their reflecting surfaces and the images they form. • Applies the laws of reflection to determine the path of light rays hitting a reflecting surface. • Distinguishes between convex and concave lenses by observing their physical thickness and how they converge or diverge light. • Explains the practical applications of spherical mirrors and lenses in daily life. 	<ul style="list-style-type: none"> • 10.1: Using a shiny metallic spoon to observe images. • 10.2: Identifying mirrors by viewing them from the side. • 10.3: Observing characteristics of images at different distances. • 10.4: Observing the reflection of a beam of light. • 10.5:Demonstrating that incident and reflected rays lie in the same plane. • 10.6: Observing convergence and divergence with multiple parallel beams. • 10.7: Converging sunlight on paper using a concave mirror. • 10.8: Creating a simple lens using a water drop. • 10.9: Viewing objects through different lenses. • 10.10: Observing how lenses converge or diverge light beams. • 10.11: Attempting to burn paper with a convex lens and sunlight

<p>Natural Phenomena</p>	<p>Ch-11: Keeping Time with the Skies</p>	<ul style="list-style-type: none"> • Identifies the different phases of the Moon, such as waxing (Shukla Paksha) and waning (Krishna Paksha), by observing the changing bright portion seen from Earth. • Explains the astronomical basis for time-keeping units like the day, month, and year through the rotation and revolution of the Earth and Moon. • Differentiates between various calendar systems, including lunar, solar, and luni-solar calendars, based on how they synchronize with natural cycles and seasons. • Describes the importance of artificial satellites in modern life, including their roles in communication, navigation, and scientific research. 	<ul style="list-style-type: none"> • 11.1: Documenting changes in the Moon's appearance over a month. • 11.2: Using a ball and stick to understand how the illuminated portion of the Moon changes. • 11.3: Measuring the duration of a solar day by tracking the shortest shadow cast by a stick . • 11.4: Spotting artificial satellites in the night sky just before sunrise or after sunset
<p>Natural Resources</p>	<p>Ch-12: How Nature Works in Harmony</p>	<ul style="list-style-type: none"> • Identifies the biotic and abiotic components within various habitats and explains their essential roles in supporting life . • Analyses the complex interconnections within an ecosystem, including food chains, food webs and different types of organism interactions like mutualism and parasitism . • Explains how human interventions and unsustainable practices, such as pollution and overexploitation, disrupt ecological balance and threaten 	<ul style="list-style-type: none"> • 12.1: Identifying living and non-living components in two nearby habitats. • 12.2: Counting the population of specific organisms in a marked area. • 12.3: Analyzing how fish populations affect seed production in nearby plants. • 12.4: Describing interactions between biotic and abiotic components. • 12.5: Identifying eating habits of various organisms in a forest ecosystem. • 12.6: Drawing feeding relationships to represent a food chain in a grassland. • 12.7:Creating a trophic level pyramid based on a specific food chain.

		<p>biodiversity .</p> <ul style="list-style-type: none"> • Advocates for sustainable practices and conservation efforts, such as protected areas and eco-friendly farming, to maintain healthy ecosystems for future generations . 	<ul style="list-style-type: none"> • 12.8:Identifying interlinked food chains to form a food web. • 12.9: Exploring the ecological impact of the decline in frog populations. • 12.10: Interacting with farmers to understand current farming practices and their environmental impact.
Natural Resources	Ch-13 : Our Home: Earth, a Unique Life Sustaining Planet	<ul style="list-style-type: none"> • Identifies the unique physical and environmental features—such as gravity, atmosphere, and liquid water—that make Earth the only planet known to sustain life. • Explains how the greenhouse effect, the Earth’s specific size, and its magnetic field collectively act as a protective shield for living organisms. • Analyses the interdependence within the biosphere, hydrosphere, and geosphere • Differentiates between asexual and sexual reproduction processes in plants and animals 	<ul style="list-style-type: none"> • 13.1: Listing features of the Earth that make it special and important to us. • 13.2: Collecting information about the temperature, size, and atmosphere of different planets in the solar system. • 13.3: Observing vegetative propagation by planting parts like money plant cuttings, potato eyes, or ginger.
Revision of entire syllabus for Annual Examination.			
<p>Note:-</p> <ul style="list-style-type: none"> ❖ The above mentioned syllabus should be completed by January 30, 2027. ❖ In Annual Examination questions will be asked from the entire syllabus. 			
Annual Exam 2027			