BLOOM PUBLIC SCHOOL
C-8, Vasant Kunj, New Delhi
Syllabus for the session
2026-2027

CLASS IX
SUBJECT: SCIENCE

MONTH	CHAPTERS (AS PER NCERT)	CONTENT	PRACTICAL/ ACTIVITIES
APRIL	**Exploring Mixtures and Their Separation**	**Exploring Mixtures and Their Separation** ● Homogeneous and heterogeneous mixtures; ● Solutions, suspensions, colloids and their properties ● Various ways to express concentration of solutions (mass by mass percentage of a solution, mass by volume percentage of a solution, volume by volume percentage of a solution) ● Separation techniques based on the physical properties of components, including crystallisation, distillation, paper chromatography, sublimation, centrifugation and coagulation	Activity: Poster on any one activity of your choice from the NCERT. Various equipment used in the chemistry lab.
	Cell	**Cell** ● Discovery of cell ● Plant and animal cells ● Prokaryotic and eukaryotic cells ● Cell as a structural and functional unit of life; ● structure and function of key organelles (Nucleus, mitochondria, chloroplast, endoplasmic	Various equipment used in the biology lab Experiment: Temporary mount of cheek cells.

	Motion	reticulum, vacuoles, plasma membrane, cell wall) ● Permeability of cell membranes ● Cellular division and ● cancer ● Recent advancement in cell biology **Motion** ● Motion — displacement, velocity, acceleration ● Graphical representation of motion for an object moving in a straight line in one direction (with constant velocity, and constant acceleration) ● Kinematic equations for motion in a straight line with constant acceleration (by graphical method) ● Elementary idea of uniform circular motion	Various equipment used in the Physics lab Experiment: To find the speed of different moving bodies
MAY	**Exploring Mixtures and Their Separation**	**Exploring Mixtures and Their Separation** ● Homogeneous and heterogeneous mixtures; ● Solutions, suspensions, colloids and their properties ● Various ways to express concentration of solutions (mass by mass percentage of a solution, mass by volume percentage of a solution, volume by volume percentage of a solution) ● Separation techniques based on the physical properties of components, including crystallisation, distillation, paper chromatography, sublimation, centrifugation and coagulation	Activity: Make a flowchart of matter Experiment: Types of solutions and their features Experiment: Separation Techniques

	Cell	**Cell** ● Discovery of cell ● Plant and animal cells ● Prokaryotic and eukaryotic cells ● Cell as a structural and functional unit of life; ● structure and function of key organelles (nucleus, mitochondria, chloroplast, endoplasmic reticulum, vacuoles, plasma membrane, cell wall) ● Permeability of cell membranes ● Cellular division and ● cancer ● Recent advancement in cell biology	Experiment: Temporary mount of onion peel. Activity: Role play & colorful diagrams of different organelles on A4 pages.
	Motion	**Motion** ● Motion — displacement, velocity, acceleration ● Graphical representation of motion for an object moving in a straight line in one direction (with constant velocity, and constant acceleration) ● Kinematic equations for motion in a straight line with constant acceleration (by graphical method) ● Elementary idea of uniform circular motion	Experiment: To understand inertia of motion and rest through activity.
JULY	**Structure of an Atom**	**Structure of an Atom** ● Atoms are the basic units of elements ● Atoms consist of subatomic particles ● Atomic Models (Thomson's Model, ● Rutherford's Model, and Bohr's Model) ● Distributions of electrons in elements (up to 18 elements)	Experiment: Preparation of mixture and compound.

		• Symbols • Valency as the combining capacity • Atomic number • Mass number • Isotopes • Isobars	
	Tissue	**Tissue** • Tissues: Introduction and importance • Level of organisation in the living organisms • Plant and animal tissues • Types of plant tissues • Meristematic tissues (types and function of each) • Permanent tissues (types, structure and function of each) • Animal tissues • Overview (epithelial, connective, muscular and nervous tissues — types, structure and function of each) • Elementary idea of musculoskeletal system Care of musculoskeletal system: injuries, postural care, nutrition and exercise.	Experiment: Temporary mount of onion peel. Experiment: To see tissue on a slide.
	Force and Laws of Motion	**Force and Laws of Motion** • Force; balanced and unbalanced forces • Force of friction • Newton's first law of motion • Newton's second law of motion • Newton's third law of motion	Experiment: To study motion on an inclined plane.
AUGUST	**Structure of an Atom**	**Structure of an Atom** • Atoms are the basic units of elements • Atoms consist of subatomic particles	Activity: Numerical on atomic mass and number. Experiment: Type of reactions: Physical and chemical.

		• Atomic Models (Thomson's Model, • Rutherford's Model, and Bohr's Model) • Distributions of electrons in elements (up to 18 elements) • Symbols • Valency as the combining capacity • Atomic number • Mass number • Isotopes • Isobars	Activity of criss cross method. Experiment: Melting and boiling point of water.
	Tissue	**Tissue** • Tissues: Introduction and importance • Level of organisation in the living organisms • Plant and animal tissues • Types of plant tissues • Meristematic tissues (types and function of each) • Permanent tissues (types, structure and function of each) • Animal tissues • Overview (epithelial, connective, muscular and nervous tissues — types, structure and function of each) • Elementary idea of musculoskeletal system Care of musculoskeletal system: injuries, postural care, nutrition and exercise.	Experiment: Plant tissues from permanent slides. Activity: Flowchart of plant and animal tissues with their location and functions.
	Force and Laws of Motion	**Force and Laws of Motion** • Force; balanced and unbalanced forces • Force of friction • Newton's first law of motion • Newton's second law of motion • Newton's third law of motion	Experiment: Determination of the density of solid (denser than water) by using a spring balance and a measuring cylinder.
SEPTEMBER		REVISION	

OCTOBER	**Atoms and Molecules**	**Atoms and Molecules** ● Law of conservation of mass ● Law of constant proportion ● Dalton's Atomic theory ● Molecules of elements, Molecules of covalent compounds and their properties Ions, Ionic compounds and their properties writing chemical formulae ● Molecular mass ● Formula unit mass	Activity: Drawing of atomic structure. Activity: Isobars and isotope
	Reproduction	**Reproduction** ● Introduction to different forms of reproduction — sexual and asexual ● Types of asexual reproduction with examples ● Sexual reproduction in flowering plants (flower and its parts, pollination, ● fertilisation, seed dispersal) ● Sexual reproduction in humans: male and ● female reproductive systems (structure and function, formation of gametes, sperm and egg, fertilisation, pregnancy and development of embryo, menstrual cycle) ● Reproductive health and hygiene ● Introduction to birth control methods and importance	Experiment: Animal tissues from permanent slides. Slide show in the lab of Reproduction in amoeba Pollen grain under the lens Garden visit to explore parts of the flower.
	Work, Energy and Simple Machines	**Work, Energy and Simple Machines** ● Concept of work; work done by a constant force ● Work-Energy theorem	Simple machine and its working will be shown (pHET, Laboratory)

		• Mechanical energy, kinetic and potential energy, and conversion between potential energy and kinetic energy • Conservation of energy • Power • Simple machines and their mechanical advantage (pulley, inclined plane, lever)	Experiment: Pendulum motion to measure energy at different levels.
NOVEMBER	**Atoms and Molecules** **Reproduction**	**Atoms and Molecules** • Law of conservation of mass • Law of constant proportion • Dalton's Atomic theory • Molecules of elements, Molecules of covalent compounds and their properties Ions, Ionic compounds and their properties writing chemical formulae • Molecular mass • Formula unit mass **Reproduction** • Introduction to different forms of reproduction — sexual and asexual • Types of asexual reproduction with examples • Sexual reproduction in flowering plants (flower and its parts, pollination, • fertilisation, seed dispersal) • Sexual reproduction in humans: male and • female reproductive systems (structure and function, formation of gametes, sperm and egg, fertilisation, pregnancy and development of embryo, menstrual cycle) • Reproductive health and hygiene	Activity: Drawing of ionic structure. Experiment: Law of conservation of mass. Experiment: Animal tissues from permanent slides. Slide show in the lab of Reproduction in amoeba Pollen grain under the lens Garden visit to explore parts of the flower.

	Work, Energy and Simple Machines	● Introduction to birth control methods and importance **Work, Energy and Simple Machines** ● Concept of work; work done by a constant force ● Work-Energy theorem ● Mechanical energy, kinetic and potential energy, and conversion between potential energy and kinetic energy ● Conservation of energy ● Power ● Simple machines and their mechanical advantage (pulley, inclined plane, lever)	Simple machine and its working will be shown (pHET, Laboratory) Experiment: Pendulum motion to measure energy at different levels.
DECEMBER	**Earth as a System: Energy, Matter and Life** **Diversity**	**Earth as a System: Energy, Matter and Life** ● Earth as interconnected system ● Nature of solar energy: solar radiation, electromagnetic spectrum, and speed of light ● Solar energy interaction with the Earth's Surface and differential heating of the Earth (the role of the atmosphere and the Earth's surface) ● Differential warming of the Earth causes winds ● Biogeochemical cycles (water cycle, carbon ● cycle, nitrogen cycle, oxygen cycle) ● Human impact on Earth's system **Diversity** ● Importance of classification ● Five kingdoms and their key features with examples ● Major division of animals and plants	Observe different specimen of animals in lab

	Sound	● Binomial nomenclature ● Acellular entities: viruses **Sound** ● Production of sound ● Propagation of sound (as a longitudinal wave through a medium) ● Graphical representation of sound wave ● Characteristics of sound wave (wavelength, frequency, time period, amplitude, intensity, speed) ● Human perception of sound (pitch, loudness) ● Propagation of sound in different media (solid, liquid) ● Reflection of sound (echo, reverberation), ● echolocation	Experiment: Verification of the Laws of reflection of sound.
JANUARY	**Earth as a System: Energy, Matter and Life**	**Earth as a System: Energy, Matter and Life** ● Earth as interconnected system ● Nature of solar energy: solar radiation, electromagnetic spectrum, and speed of light ● Solar energy interaction with the Earth's Surface and differential heating of the Earth (the role of the atmosphere and the Earth's surface) ● Differential warming of the Earth causes winds ● Biogeochemical cycles (water cycle, carbon ● cycle, nitrogen cycle, oxygen cycle) ● Human impact on Earth's system	Activity: Cycle to be drawn on A4 sheet.

	Diversity **Sound**	**Diversity** ● Importance of classification ● Five kingdoms and their key features with examples ● Major division of animals and plants ● Binomial nomenclature ● Acellular entities: viruses **Sound** ● Production of sound ● Propagation of sound (as a longitudinal wave through a medium) ● Graphical representation of sound wave ● Characteristics of sound wave (wavelength, frequency, time period, amplitude, intensity, speed) ● Human perception of sound (pitch, loudness) ● Propagation of sound in different media (solid, liquid) ● Reflection of sound (echo, reverberation), ● echolocation	Observation of plants with their scientific name. Experiment: Verification of the Laws of reflection of sound. Experiment: Wave motion in slinky spring.
FEBRUARY	**REVISION-EXAM**	**REVISION -EXAM**	**PRACTICAL EXAM**
MARCH	**EXAM**	**EXAM**	

ASSESSMENT SYLLABUS	
PERIODIC ASSESSMENT -1	● **Exploring Mixtures and Their Separation** ● **Cell** ● **Motion**

PERIODIC ASSESSMENT -2	• **Atoms and Molecules** • **Reproduction** • **Work, Energy and Simple Machines**
MID-TERM EXAM	• **Exploring Mixtures and Their Separation** • **Structure of an Atom** • **Motion** • **Cell** • **Force and laws of motion** • **Tissue**
ANNUAL EXAMINATION	• **Exploring Mixtures and Their Separation** • **Structure of an Atom** • **Atoms and Molecules** • **Work, Energy and Simple Machines** • **Earth as a System: Energy, Matter and Life** • **Sound** • **Diversity** • **Reproduction** • **Tissue** • **Cell**