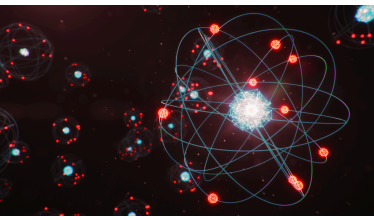
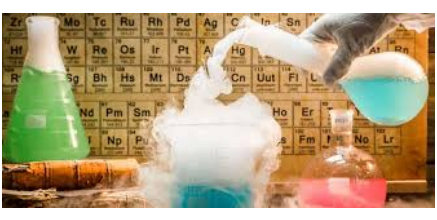
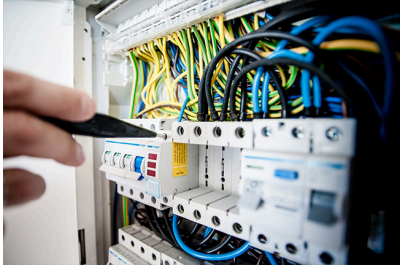


- What does it mean to act, think, and communicate like a scientist and engineer?
- Why is it important to find relevance of science in your everyday lives?

UNIT 1 Introduction to Study of Matter	UNIT 2 Atoms and the Periodic Table	UNIT 3 Chemical Reactions	Unit 4 Solutions/Solubility
			
FOCUS OF THE STORY	FOCUS OF THE STORY	FOCUS OF THE STORY	FOCUS OF THE STORY
Everything around us is made of something—matter. Matter is anything that has mass and takes up space, and it can exist in different states like solids, liquids, and gases. At its core, matter is built from tiny particles that form all the materials and objects we encounter in daily life. These particles behave differently depending on their energy and arrangement, which is why ice melts, water boils, and gases expand. We can describe matter by its properties—such as density, state, or reactivity—which help us understand how it behaves and how we use it. In this unit, we'll explore these concepts and prepare to dive deeper into the building blocks of matter—atoms—and the forces that govern the physical world. We will also learn how scientists work, measuring, analyzing data, using lab equipment, and staying safe in the lab.	The world around us is built from tiny building blocks called atoms, and in this unit, we'll explore their amazing structure. We'll start by modeling atoms, examining their properties and reactivity, and considering how these properties influence their utility in daily life. From understanding this, we'll examine how these properties dictate their placement on the Periodic Table of Elements. Finally, we'll explore the tiny world inside the atom, seeing how electrons move between energy levels and emit light, providing evidence for the wave-particle duality.	Having explored the fundamental structure of atoms and the table, we now look at how these atoms interact and change in chemical reactions forming new substances. We'll investigate the law of conservation of mass in chemical reactions and consider how the atoms involved rearrange in chemical processes. Then, we'll explore nuclear reactions, which involve changes within the atom's nucleus, researching their uses and considering their advantages and disadvantages. Finally, we'll connect these processes to environmental concerns. You'll be able to explain and model how atoms interact in chemical reactions and understand the consequences of these interactions for our world.	Some substances mix easily, while others don't—and understanding why leads us into the world of solubility, solutions, acids, and bases. Every time you stir sugar into tea or dissolve salt in water, you're witnessing solubility in action: the ability of a substance to dissolve in a solvent to form a solution. Solutions are all around us—from sports drinks to the air we breathe—and their properties depend on the types and amounts of solutes and solvents involved. Some substances dissolve better than others, and factors like temperature and particle size can make a big difference. This unit will help you see the hidden chemistry in the world around you and understand how substances interact in fascinating and useful ways.
ESSENTIAL QUESTION	ESSENTIAL QUESTION	ESSENTIAL QUESTION	ESSENTIAL QUESTION
How does understanding the structure, properties, and behavior of matter help us make sense of the physical world around us?	How does the structure of an atom determine the properties and behavior of the elements?	How do chemical reactions rearrange atoms to create new substances?	What factors affect how substances dissolve, and how does understanding solutions help us explain everyday chemical interactions?

UNIT 5 Forces & Motion	UNIT 6 Energy	UNIT 7 Electricity & Magnetism	UNIT 8 Waves
			
FOCUS OF THE STORY	FOCUS OF THE STORY	FOCUS OF THE STORY	FOCUS OF THE STORY
We now turn our attention to the forces that govern the motion of objects. In this unit, we'll investigate the world of forces, the invisible pushes and pulls that make things move. Throughout this unit, we'll explore the fundamental forces that operate across the universe. We'll analyze data to understand the relationship between an object's mass and its acceleration. Building on this understanding, we'll apply the concepts of momentum and impulse to design solutions for real-world problems. Finally, we'll investigate in great detail the factors that influence gravitational forces. By the end, you'll be able to explain motion and understand the fundamental forces that shape the universe.	Building on our understanding of forces and motion, we now turn to energy, the driving force behind all these changes. In this unit, we'll delve into the fundamental principle of energy conservation. We will plan and conduct investigations to provide evidence that energy is conserved within a closed system. We'll then investigate how thermal energy moves and is transferred.	In this unit, we'll investigate how mass, charge, and distance influence the strength of electrical forces, building upon our earlier exploration of gravitational forces. We'll then design and construct series and parallel circuits. Finally, we'll explore the connection between electricity and magnetism, designing devices that generate electrical energy through their interaction. You'll be able to explain the relationship between electricity and magnetism and apply your knowledge to create and analyze electrical circuits.	Having explored the interplay of electricity and magnetism, we now broaden our understanding of energy transfer to include waves, a phenomenon closely linked to these forces. In this unit, we'll investigate how energy and information are transferred through different types of waves. We'll explore how wave are used in technologies that rely on wave phenomena, like medicine, communication, and scientific research. By the end of this unit, you'll be able to explain how waves transfer energy and information and how wave properties are applied in various technologies.
ESSENTIAL QUESTION	ESSENTIAL QUESTION	ESSENTIAL QUESTION	ESSENTIAL QUESTION
How do objects move and change their motion?	How is energy conserved and transferred?	How are electricity and magnetism related, and how can we harness them to power our world?	How do waves transfer energy and information?