

Subject	Science	Class	I	Book	Innovative Science 1 (Turnkey Publishers)
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FIRST TERM	Number of months : 4-5	Tentative Number of Working Days: 85
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Month	Chapters	Page #	Learning Outcomes
Month # 01	Unit 1: LIFE ON EARTH Lesson # 1 Living and Non-Living Things Worksheets of Lesson # 1 Lesson # 2 Functions of our body parts Worksheets of Lesson # 2	06 11	<ul style="list-style-type: none"> ✓ Classify objects as living and non living. ✓ Identify what living things need to survive. ✓ Identify some common body parts. ✓ Recognize the functions of each part of the body.
Month # 02	Lesson # 3 Why do we eat? Worksheets of Lesson # 3	16	<ul style="list-style-type: none"> ✓ Identify healthy and unhealthy foods. ✓ Understand the importance of fruits and vegetables in daily life. ✓ Distinguish which animals give us meat, egg and milk.
Month # 03	Unit 2: MATTERS ON EARTH Lesson # 6 Materials Worksheets of Lesson # 6 Unit 3: OUR UNIVERSE Lesson # 9 Day and Night Worksheets of Lesson # 9	30 43	<ul style="list-style-type: none"> ✓ To recognize simple properties of materials. ✓ To understand that materials are suitable for making a particular object because of their properties. ✓ Know about four directions. ✓ Categorize the parts of day.
Month # 04	Unit 4: ELECTRICITY AND SOUND Lesson # 11 Electricity Worksheets of Lesson # 11	50	<ul style="list-style-type: none"> ✓ Know about the electronic items. ✓ Differentiate the things which do not need electricity.

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Number of months: 4-5

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Month	Chapters	Page #	Learning Outcomes
Month # 05	Unit 1: LIFE ON EARTH Lesson # 4 Animals and Birds Worksheets of Lesson # 4	22	<ul style="list-style-type: none"> ✓ Differentiate animals and birds according to characteristics. ✓ Identify different kinds of birds and animals.
Month # 06	Lesson # 5 Plants and Trees Worksheets of Lesson # 5 Unit 2: MATTERS ON EARTH Lesson # 7 Air Around Us Worksheets of Lesson # 7	26 34	<ul style="list-style-type: none"> ✓ Explore plant as living thing. ✓ Know about the things that a plant need to grow. ✓ Discover that air is everywhere. ✓ Understand the characteristics of air. ✓ Differentiate wind and air.
Month # 07	Lesson # 8 Water Worksheets of Lesson # 8	38	<ul style="list-style-type: none"> ✓ Understand the uses of water. ✓ Identify the characteristics of water. ✓ Know about the state of liquid.
Month # 08	Unit 3: OUR UNIVERSE Lesson # 10 Weather Worksheets of Lesson # 10	47	<ul style="list-style-type: none"> ✓ Explore the difference between hot or cold, clear or cloudy. ✓ Understanding of classification by sorting weather pictures.
Month # 09	Unit 4: ELECTRICITY AND SOUND Lesson # 12 Sounds Worksheets of Lesson # 12	54	<ul style="list-style-type: none"> ✓ Differentiate high and low sound. ✓ Recognize pleasant, unpleasant, meaningful and non-meaningful sounds.

Subject	Science	Class	II	Book	Innovative Science 2 (Turnkey Publishers)
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FIRST TERM	Number of months : 4-5	Tentative Number of Working Days: 85
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Month	Chapters	Page #	Learning Outcomes
Month # 01	Unit 1: LIFE CYCLE Lesson # 1 Our Body Structure Worksheets of Lesson # 1 Lesson # 2 Structure of Plants Worksheets of Lesson # 2	06 10	<ul style="list-style-type: none"> ✓ Identify the external and internal part of our body. ✓ Know about flesh, muscles and blood. ✓ Recognize the different part of plant and their function. ✓ Identify different sort of leaves. ✓ Know about fruit's and flower's size and color.
Month # 02	Lesson # 3 About Seeds Worksheets of Lesson # 3 Unit 2: MATERIALS Lesson # 5 Types Of Materials Worksheets of Lesson # 5	14 22	<ul style="list-style-type: none"> ✓ Understand the importance of seeds as part of the plant. ✓ Know about how do plants reproduce. ✓ Observe the growing bean plant. ✓ Understand different types of materials. ✓ List different things which are made up of wood, glass, fabrics rubber and leather.

<p>Month # 03</p>	<p>Unit 3: LAND, WATER AND AIR Lesson # 7 Land Worksheets of Lesson # 7 Unit 4: OUR UNIVERSE Lesson # 10 Sun, Moon and Stars Worksheets of Lesson # 10</p>	<p>31 43</p>	<ul style="list-style-type: none"> ✓ Understand different parts of the surface of earth. ✓ Differentiate mountains and hills. ✓ Understand flat land and deserts' features for agriculture purpose. ✓ Identify the sun as the center of our solar system. ✓ Demonstrate the rotation of all planets. ✓ Aware about the planets' name.
<p>Month # 04</p>	<p>Unit 5: ELECTRICITY AND SOUND Lesson # 12 Electricity and its uses Worksheets of Lesson # 12</p>	<p>50</p>	<ul style="list-style-type: none"> ✓ Understand importance of electricity in our daily life. ✓ Enlist some electronic items. ✓ Explore static electricity.

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Month	Chapters	Page #	Learning Outcomes
Month # 05	Unit 1: LIFE CYCLE Lesson # 4 Animal's living Worksheets of Lesson # 4	18	<ul style="list-style-type: none"> ✓ Discuss the diversity of life found in different habitats. ✓ Identify animals that live in different environment.
Month # 06	Unit 2: MATERIALS Lesson # 6 Materials from Plants Worksheets of Lesson # 6 Unit 3: LAND, WATER AND AIR Lesson # 8 The Water Cycle Worksheets of Lesson # 8	27 36	<ul style="list-style-type: none"> ✓ Know about the importance of plant. ✓ Understand plants and trees as a source of fruits and vegetables. ✓ Explore usage of plants in daily life. ✓ Describe the water cycle. ✓ Identify and explain the three states of water transitions. ✓ Observe the movement of water through the different stages of the water cycle.
Month # 07	Lesson # 9 Air Worksheets of Lesson # 9	39	<ul style="list-style-type: none"> ✓ Understand air as mixture of different gases. ✓ Describe air as something that takes up space and has mass.
Month # 08	Unit 4: OUR UNIVERSE Lesson # 11 About Day and Night Worksheets of Lesson # 11	47	<ul style="list-style-type: none"> ✓ Understand how day and night occur as a result of earth's rotation. ✓ Identify sunrise, day, moon, sunset and night as the earth spin.
Month # 09	Unit 4: ELECTRICITY AND SOUND Lesson # 13 Different sounds Worksheets of Lesson # 13	56	<ul style="list-style-type: none"> ✓ Differentiate different sound. ✓ Enlist some musical instruments that produce pleasant sound. ✓ Explain and differentiate noise and pleasant sound.

Term wise & Month wise Distribution of Syllabus (Tentative 9-10 months)

Subject	Science	Class	III	Book	Innovative Science 3 (Turnkey Publishers)
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FIRST TERM	Number of months : 4-5	Tentative Number of Working Days: 85
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Month	Chapters	Page #	Learning Outcomes
Month # 01	Unit 1: LIFE PROCESS AND CELL ACTIVITY Lesson # 1 Parts of Plant and Their Functions Lesson # 2 How Animals Eat?	08 18	<ul style="list-style-type: none"> ✓ Understand the two main organ systems of plant. ✓ Identify the different types of root. ✓ Describe the function of root system. ✓ Explain the important functions of shoot system. ✓ Understand the different types of seeds, present in different fruits. ✓ Classify animals on the basis of food they feed. ✓ Differentiate between Herbivorous, Carnivorous and Omnivorous with the help of example. ✓ Understand that animals can be group according to what they eat.
Month # 02	Unit 2: MATTER AND ITS PROPERTIES Lesson # 5 States of Matter Unit 3: EARTH AND SPACE Lesson # 7 Investigate the Plants	38 52	<ul style="list-style-type: none"> ✓ Understand about the matter. ✓ Sort objects by observable properties such as size, shape, colour, weight and texture. ✓ Understand the planet than any image contain valuable information, but require interpretation, which is somewhat uncertain. ✓ Recognize each planet or moon by its unique and identifiable features.

<p>Month # 03</p>	<p>Lesson # 8 Types of Rocks Unit 4: PHYSICAL PROCESS Lesson # 10 Force and Motion</p>	<p>59 73</p>	<ul style="list-style-type: none"> ✓ Know about the rocks and types of rocks. ✓ Demonstrate the types of rocks. ✓ Understand the terms: Fossils, magma, volcano, crystal. ✓ Understand the basic concept of force. ✓ Explore how different motions can be represented through distance time and speed. ✓ Making the links between different kinds of motion and the states of the forces acting.
<p>Month # 04</p>	<p>Unit 5: WATER AND ATMOSPHERE Lesson # 13 Air and Weather</p>	<p>38</p>	<ul style="list-style-type: none"> ✓ Understand air and explore its characteristics. ✓ Differentiate easily fresh air and bad air. ✓ Observe different types of weather- rainy, sunny, cloudy and wind. ✓ Observe changes in weather patterns over a specific time period.

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Month	Chapters	Page #	Learning Outcomes
Month # 05	Unit 1: LIFE PROCESS AND CELL ACTIVITY Lesson # 3 Our Body Parts and their Functions	24	<ul style="list-style-type: none"> ✓ Distinguish between the cell, Tissue, organ and organ system. ✓ Study the structure of different organs of human body. ✓ Investigate the different human body parts and analyze their basic function.
Month # 06	Lesson # 4 Characteristics of Birds Unit 2: MATTER AND ITS PROPERTIES Lesson # 6 Changes in Matter	31 45	<ul style="list-style-type: none"> ✓ Classify birds based on their physical characteristics and behaviours. ✓ Sort into group based on their physical characteristics. ✓ Know about the properties of matter. ✓ Understand the term physical and chemical changes. ✓ Discuss the difference between physical and chemical change.
Month # 07	Unit 3: EARTH AND SPACE Lesson # 9 The Moon and Stars	66	<ul style="list-style-type: none"> ✓ Know about the moon. ✓ Understand the history of moon. ✓ Describe the “moon” revolves the “earth”.
Month # 08	Unit 4: PHYSICAL PROCESS Lesson # 11 Light and Shadow Lesson # 12 Sound Waves	80 87	<ul style="list-style-type: none"> ✓ To know the light and its sources. ✓ Differentiate the reflection and refraction of light. ✓ Explain the transparency of materials. ✓ Understand that the opaque object makes shadow. ✓ Understand that sound is a form of energy that travels in waves referred to as mechanical waves. ✓ Understand that sound waves can travel through different mediums, including solid, liquid and gas. ✓ Observe a variety of sound waves in lab station and record their observation in a waves booklet.
Month # 09	Unit 5: WATER AND ATMOSPHERE Lesson # 14 Water is Everywhere	100	<ul style="list-style-type: none"> ✓ Understand the water cycle. ✓ Know about the steps of water cycle. ✓ Verbalize and name stages of water cycle through demonstration. ✓ Apply knowledge through illustrating and labeling a picture of the water cycle.

Subject	Science	Class	IV	Book	Innovative Science 4 (Turnkey Publishers)
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FIRST TERM	Number of months : 4-5	Tentative Number of Working Days: 85
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Month	Chapters	Page #	Learning Outcomes
Month # 01	Unit 1: LIFE SCIENCE AND CELL ACTIVITY Lesson # 1 How Plants Make Their Food? Lesson # 2 Human Digestive System	08 17	<ul style="list-style-type: none"> ✓ Explain the term photosynthesis. ✓ Describe phenomena of photosynthesis and chloroplast. ✓ Gather evidence of inputs and outputs of photosynthesis. ✓ Describe the structure of leaves. ✓ Demonstrate the function of stomata. ✓ Explain the function of human digestive system. ✓ Identify organs that are involved in digestive system. ✓ Understand the function of small intestine and large intestine. ✓ Draw the diagram of digestive system.
Month # 02	Unit 2: MATTER AND ITS PROPERTIES Lesson # 5 Solution and Its Types Unit 3: EARTH AND SPACE SCIENCE Lesson # 7 Soil	43 62	<ul style="list-style-type: none"> ✓ Define solvent and solution with examples. ✓ Explain the mystery of dissolving a solute in a solvent. ✓ Identify the different types of solution. ✓ Classification of solution. ✓ Understand the solubility. ✓ Understand what is soil? ✓ Explain what is dirt? ✓ Explore different general roles that soils play. ✓ Identify different types of soil.

<p>Month # 03</p>	<p>Unit 4: PHYSICAL PROCESS Lesson # 9 Force and Simple Machine Lesson # 10 Winds of Energy</p>	<p>82 110</p>	<ul style="list-style-type: none"> ✓ Understand the term force. ✓ Explain machine and types of simple machine. ✓ Understand the basic use of machine. ✓ Explain example of simple machine. ✓ Brief the functions of simple machine. ✓ Explain energy and identify the different types that exist. ✓ Brief the two main kinds of energy and different forms of energy. ✓ Identify various forms of transformable energy. ✓ Explain main source of energy. ✓ Demonstrate thermal energy put to work.
<p>Month # 04</p>	<p>Lesson # 11 Understanding Heat</p>	<p>101</p>	<ul style="list-style-type: none"> ✓ Explain that heat is the flow of energy from hot materials to cold materials. ✓ Describe that molecules in a material begin to vibrate (or move) more quickly when the material is heated. ✓ Identify conduction as heat transfer within and between solid.

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Month	Chapters	Page #	Learning Outcomes
Month # 05	Unit 1: LIFE SCIENCE AND CELL ACTIVITY Lesson # 3 Nutrients of Our Food	25	<ul style="list-style-type: none"> ✓ Understand the nutrients and its types. ✓ Explain source and functions of nutrients. ✓ Describe the balance diet. ✓ Understand the preservation of food. ✓ Demonstrate the carbohydrate present in food item.
Month # 06	Lesson # 4 Food Chain Unit 2: MATTER AND ITS PROPERTIES Lesson # 6 Matter, Elements and Atoms	34 53	<ul style="list-style-type: none"> ✓ Explain the food chain. ✓ Understand the producers, consumers and decomposers. ✓ Identify the herbivores, carnivores and omnivores organisms. ✓ Know that the animals and plants in a local habitat are interdependent. ✓ Explain that a food chain starts with a plant. ✓ Understand elements and atom. ✓ Explain atom is building block for matter. ✓ Identify the electrical charges of an atom. ✓ Calculate the atomic mass.
Month # 07	Unit 3: EARTH AND SPACE SCIENCE Lesson # 8 What is a Satellite?	72	<ul style="list-style-type: none"> ✓ Understand the satellites ✓ Explain natural satellites and artificial satellites. ✓ Explore about the different artificial satellite, ✓ Describe the function or action of artificial satellites.

<p>Month # 08</p>	<p>Unit 4: PHYSICAL PROCESS Lesson # 12 Action and Reaction forces 110 Lesson # 13 Circuits and Electric current 118</p>		<ul style="list-style-type: none"> ✓ Explain action and reaction forces ✓ Demonstrate action and reaction ✓ Explain how aeroplane and rockets depend on action and reaction forces ✓ Explain gravitational force. ✓ Demonstrate how freely falling objects fall down to the earth. ✓ Describe electric circuits. ✓ Make parallel and series circuits. ✓ Investigate types of circuits used for different purposes. ✓ Explain electric charges.
<p>Month # 09</p>	<p>Unit 5: WATER AND ATMOSPHERE Lesson # 14 How does climate change? 128</p>		<ul style="list-style-type: none"> ✓ Understand climate, weather and climate change. ✓ Explain green house and effects of green house. ✓ Brief the effects of climate change. ✓ Explain global warming.

Subject	Science	Class	V	Book	Innovative Science 5 (Turnkey Publishers) Innovative Science Journal 5
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Month	Chapters	Page #	Learning Outcomes
Month # 01	Unit 1: LIFE SCIENCE AND CELL ACTIVITY Lesson # 1 How Teeth work? Lesson # 2 Reproduction in Plants Experiment # 1 Flower Structure	10 20 06	<ul style="list-style-type: none"> ✓ Explain concept of milk teeth and permanent teeth. ✓ Demonstrate the shapes and locations of incisors, canines, premolars and molars by using charts, pictures or drawings. ✓ Explain the types of teeth; incisors, canines, premolars and molars. ✓ Describe the structure of tooth. ✓ Know the different tooth problems. ✓ Discuss how to take care of teeth. ✓ Understand the effect of acid on calcified eggshell. ✓ Understand that pollination involves the transfer of pollen grains from stamens to stigmas of flowers. ✓ Understand the meaning of reproduction in plant. ✓ Identify the reproductive parts of a flower. ✓ Describe the function of each parts. ✓ Recognize how asexual reproduction in plants differs from sexual reproduction. ✓ Explain fertilization in angiosperms. ✓ Differentiate pollination and fertilization.

<p>Month # 02</p>	<p>Unit 2: SCIENCE MATTER Lesson # 6 Molecules, Mixture and Compound Experiment # 2 Pulse Rate to Blood Pressure Skill # 1 Hygiene in Children</p>	<p>59 14 63-70</p>	<ul style="list-style-type: none"> ✓ Understand compound molecules and mixtures. ✓ Distinguish between elements, compounds and mixtures. ✓ Recognize examples of compound and mixtures from surrounding. ✓ Explain the uses of some common mixtures in daily life. ✓ Explore why air is considered to be a mixture of gases. ✓ Discuss components of some mixtures use in our daily life. ✓ Demonstrate with an experiment how to separate mixture of sand and salt.
<p>Month # 03</p>	<p>Unit 3: EARTH SCIENCE Lesson # 8 Volcanic Eruption Experiment # 4 Evaporation Skill # 2 Mental Health</p>	<p>81 28 71-80</p>	<ul style="list-style-type: none"> ✓ Define the vocabulary associated with volcanoes. ✓ Explain how destructive and constructive plate boundaries are involved in the volcano making process. ✓ Describe the different stages of volcanoes. ✓ Explain why volcanic eruption. ✓ Distinguish between lava and magma. ✓ Discuss the pyroclastic flow, lahar, pumice, largest active volcano.
<p>Month # 04</p>	<p>Unit 4: PHYSICAL Science Lesson # 9 Reflection of Light Experiment # 7 Reflection of Light Skill # 5 Ecology</p>	<p>94 44 87-88</p>	<ul style="list-style-type: none"> ✓ Examine how light can be reflected by a mirror or refracted by a lens. ✓ Explore how light is reflected of an object and understand that the angle of the outgoing light is equal to the angle of the incoming light (law of reflection) ✓ Explain that light travels in a straight line. ✓ Identify types of images formed by mirror. ✓ Identify types of spherical mirrors when it reflects off object (like mirror) or rough object (piece of page)

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Month	Chapters	Page #	Learning Outcomes
Month # 05	Unit 1: LIFE SCIENCE AND CELL ACTIVITY Lesson # 3 Circulatory System Skill # 3 First Aid	30 76-80	<ul style="list-style-type: none"> ✓ Understand the circulatory system. ✓ Describe the structure and function of three types of blood vessels. ✓ Explain how blood flow and regulated in each of the three types of blood vessels. ✓ Identify the structure and chambers of the human heart. ✓ Investigate how heart pumps blood. ✓ Describe what happens to blood in the lungs. ✓ Explore functions of the circulatory system.
Month # 06	Lesson # 4 Our Excretory System Organs Experiment # 5 Solution, Suspension and Colloids Experiment # 9 Levers Use Force Skill # 4 Nutrition	40 53 81-86	<ul style="list-style-type: none"> ✓ Understand the word excretion. ✓ Explain excretory system. ✓ Identify the functions of excretory system. ✓ List the organs of excretory system. ✓ Trace the process through which urine is produce. ✓ Explore the working of a kidney. ✓ Describe the function of liver, lungs and skin. ✓ Explain the large intestine.
Month # 07	Lesson # 5 Keeping the body healthy Experiment # 3 Dehydration	50 22	<ul style="list-style-type: none"> ✓ Discuss to maintain a healthy body by exercising hand washing, eating healthy, brushing teeth, sleeping and taking bath. ✓ Explain healthy body can make the life longer. ✓ Describe vital nutrients present in our food materials. ✓ Identify healthy food. ✓ Describe personal hygiene. ✓ Investigate regular exercise is important for the body. ✓ Discuss why sleep is important for good health.

<p>Month # 08</p>	<p>Unit 2: SCIENCE MATTER Lesson # 7 Solution and Suspension Experiment # 6 Unsaturated Solution</p>	<p>71 40</p>	<ul style="list-style-type: none"> ✓ Differentiate between a solute, solvent and solution. ✓ Identify the solute and solvent in a solution. ✓ Distinguish between dilute and concentrated solution. ✓ Prepare saturated and unsaturated solution. ✓ Explain solubility and crystalization. ✓ Differentiate between solution and suspension. ✓ Identify the use of solution, colloids and suspension in daily life.
<p>Month # 09</p>	<p>Unit 4: PHYSICAL Science Lesson # 10 Simple Introduction of Magnetism Experiment # 8 Magnetic and Non-Magnetic Materials</p>	<p>101 48</p>	<ul style="list-style-type: none"> ✓ Observe that magnets have two side/poles North and South. ✓ Predict the motion of magnets, based on knowledge that they repel and attract. ✓ Determine which objects are magnetic and which are not. ✓ Explain magnetism. ✓ Define magnets and magnetic field.

Subject	Science	Class	VI	Book	Innovative Science for Secondary Book 1 (Turnkey Publishers) Innovative Science Journal 6
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FIRST TERM

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Month	Chapters	Page #	Learning Outcomes
Month # 01	Chapter # 1 Science and The Scientific Method Chapter # 2 Cells and Cellular Structure Experiment # 1 Onion Cell	08-26 27-40 06	<ul style="list-style-type: none"> ✓ Know about the scientist. ✓ Describe the scientific method of investigation. ✓ Explain history of science. ✓ Understand the safety rules to be observed in science laboratories. ✓ Identify the common hazards in the school science lab. ✓ Describe the different parts of a light microscope and its working. ✓ Draw, label, and describe the basic structure of animal cell and plant cell. ✓ Compare and contrast an animal cell with a plant cell. ✓ Differentiate between unicellular and multicellular organisms.
Month # 02	Chapter # 5 Cellular Organization of Plants and Animals Experiment # 2 Photosynthesis Experiment # 3 Importance of Plant stems for their survival Skill # 1 Hygiene in Children	74-90 12 17 60-67	<ul style="list-style-type: none"> ✓ Understand the different types of cell carry out different functions. ✓ Define tissues and organs. ✓ Distinguished between tissues and organs. ✓ Explain plant and animal tissues. ✓ Recognize root and shoot system in plants. ✓ State the functions of the major systems of the human body. ✓ Describe the cellular hierarchy from cell to organ system in animals and plants.

<p>Month # 03</p>	<p>Chapter # 6 Force and Pressure Chapter # 7 Properties of Light Skill # 2 Mental Health</p>	<p>91-103 104-122 68-74</p>	<ul style="list-style-type: none"> ✓ Define force. ✓ Recognize the effects of force. ✓ Explain friction & uses of friction, negative effects of friction. ✓ Understand the magnetic and Gravitational force. ✓ Explain unit of force. ✓ Describe the pressure & usefulness of high & low pressure. ✓ Differentiate between transmission absorption of light. ✓ Demonstrate the law of reflection. ✓ Compare the regular and diffuse reflection. ✓ Identify everyday application, which involves regular reflection and diffused reflection. ✓ Describe image formation by a plane mirror. ✓ Explain the uses of reflecting surface in different devices. ✓ Design an experiment to make an optical instrument using mirrors. ✓ Explain the principles of reflection in a kaleidoscope. ✓ Explain types of mirrors and their uses in our daily life. ✓ Investigate the image formation by concave and convex mirrors.
<p>Month # 04</p>	<p>Chapter # 10 Atoms, Molecules, Mixtures and Compounds Experiment # 4 Boiling point of Water Experiment # 7 Static Electricity</p>	<p>144-160 23 40</p>	<ul style="list-style-type: none"> ✓ Differentiate between atoms and molecules. ✓ Recognize the symbols of some common elements. ✓ Classify elements into metal and non-metals. ✓ Relate the physical properties of elements to their uses. ✓ Differentiate between elements, compound, compounds and mixture. ✓ Identify examples of compounds and mixtures from their surroundings. ✓ Explain uses of common mixture in daily life. ✓ Explain why air is considered as a mixture of gases. ✓ Identify the sources of carbon dioxide and how its level can be maintained in nature.

FINAL TERM

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Month	Chapters	Page #	Learning Outcomes
Month # 05	Chapter # 3 Structure and Functions of Human Sense Organs Skill # 3 First Aid	41-54 75-83	<ul style="list-style-type: none"> ✓ Define senses. ✓ Name the main senses of the human body. ✓ Explain the structure and function of nose, ear, eye, skin and tongue.
Month # 06	Chapter # 4 Classification of Living Things Chapter # 8 Mass, Density and Temperature Skill # 4 Nutrition	55-73 123-132 84-89	<ul style="list-style-type: none"> ✓ Define classification. ✓ Differentiate between vertebrates and invertebrates & Classify vertebrates. ✓ Compare flowering and non - flowering plants & Classify the flowering plants . ✓ Compare the structure of a monocot and dicot leaf. ✓ Differentiate between the structure of monocot and dicot flower. ✓ Define mass & measure the mass of different object. ✓ Define Density & find the Density of a different substance. ✓ Understand floating & sinking.
Month # 07	Chapter # 9 Investigating Sound Experiment # 6 Process of Condensation Experiment # 8 Sound Travels	133-143 34 46	<ul style="list-style-type: none"> ✓ Describe sound as a form of energy. ✓ Compare the speed of sound in solids, liquids and gaseous mediums. ✓ Identify a variety of materials through which sound can travel. ✓ Explain that how does a human ear receive sound waves. ✓ Recognize the importance of sound & music in our society.
Month # 08	Chapter # 11 Separating Mixtures Experiment # 5 Rusting Process of Steel Wool	161-171 29	<ul style="list-style-type: none"> ✓ Separate mixtures using a variety of techniques. ✓ Choose a technique to separate and identify different components in dyes. ✓ Demonstrate with an experiment to separate soluble solids from mixtures.
Month # 09	Chapter # 12 Matter and Their Physical Properties Experiment # 9 Sunsets are Red colour Skill # 5 Ecology	172-184 52 90-92	<ul style="list-style-type: none"> ✓ Describe a number of physical properties of everyday object. ✓ Explain meanings of physical properties. ✓ Recognise the similarities and differences in certain physical properties among the different types of materials. ✓ Make comparisons between materials based on some simple properties. ✓ Relate physical properties of materials to their everyday uses.

Subject	Science	Class	VII	Book	Innovative Science for Secondary Book 2 (Turnkey Publishers) Innovative Science Journal 7
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FIRST TERM

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Month	Chapters	Page #	Learning Outcomes
Month # 01	<p>Chapter # 1 Micro organisms</p> <p>Chapter # 2 Invention of Muslim scientists that changed the world</p> <p>Experiment # 3 Bread mold spores</p>	<p>08-22</p> <p>23-39</p> <p>18</p>	<ul style="list-style-type: none"> ✓ Define microorganisms. ✓ Identify the main groups of microorganisms and give example of each. ✓ Describe the advantages and disadvantages of microorganisms in daily life. ✓ Define infection. ✓ Identify ways by which microorganisms can enter the human body. ✓ Suggest ways to avoid infections. ✓ Define scientific inventions. ✓ Know about Muslim scientists. ✓ Describe the contribution of Muslims scientists. ✓ Identify the Muslims scientists. ✓ List out the materials, that invented by the Muslims scientists. ✓ Compare between ancient technologies and modern technology.

<p>Month # 02</p>	<p>Chapter # 3 Respiration and common disease of Respiratory System Chapter # 7 Physical and chemical changes and process Experiment # 4 Separate the components Skill # 2 Mental Health</p>	<p>40-52 89-101 24 72-78</p>	<ul style="list-style-type: none"> ✓ Define respiration. ✓ Explain types of respiration. ✓ Describe the mechanism of respiration in human. ✓ Differentiate between breathing and burning processes. ✓ Identify the common disease of respiratory system and discuss their causes and preventive measures. ✓ Differentiate between physical and chemical changes. ✓ Identify the physical and chemical changes taking place in environment. ✓ Explain the use of hydrocarbons as fuels. ✓ Explain the physical and chemical properties of fertilizers, which make them useful in agriculture. ✓ Discuss harmful effects of improper use of fertilizers.
<p>Month # 03</p>	<p>Chapter # 8 Transmission of Heat Chapter # 11 Environment and Interaction Experiment # 9 Stored Energy Skill # 1 Hygiene in Children</p>	<p>102-117 141-153 53 64-69</p>	<ul style="list-style-type: none"> ✓ Explain the flow of heat from hot body to cold body. ✓ Explain conduction, convection and radiation through experimentation. ✓ Recognize the three modes of transfer of heat from environment. ✓ Suggest how birds can glide in the air for hours. ✓ Identify examples of applications that make use of different modes of transfer of heat. ✓ Identify the components of environment. ✓ Compare the physical factors, which make up the environment of a desert and a rain forest. ✓ Describe the relationship b/w biotic & abiotic components of the environment. ✓ Explain how abiotic factors affect the ability of plants to create their own food. ✓ Describe that living things depend on one another for food, shelter and protection.
<p>Month # 04</p>	<p>Chapter # 13 Investigating the space Experiment # 5 Soft and Hard water Experiment # 6 Volcanic Gas</p>	<p>164-172 30 36</p>	<ul style="list-style-type: none"> ✓ Define the term satellite. ✓ Compare the physical characteristics of comets, asteroids and meteors. ✓ Define the term artificial satellite and geostationary. ✓ Explain the key milestone in space technology. ✓ Investigate how artificial satellites have improved our knowledge about space and are used for space research. ✓ Explain how satellites tell us where we are.

FINAL TERM

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Month	Chapters	Page #	Learning Outcomes
Month # 05	Chapter # 4 Food –To make or to Break? Experiment # 2 Photosynthesis Skill # 4 Nutrition	53-64 12 89-94	<ul style="list-style-type: none"> ✓ Describe the internal structure of a leaf. ✓ Define photosynthesis. ✓ Explain the importance of photosynthesis in plants. ✓ Describe the effects of different factors on the process of photosynthesis. ✓ Explain that the structure of leaves facilitates photosynthesis. ✓ Prove with the help of experiments that photosynthesis take place in a leaf. ✓ Explain the importance and process of respiration in plants. ✓ Compare and contrast the process of photosynthesis and respiration in plants.
Month # 06	Chapter # 5 Transpiration Chapter # 6 Structure of an Atom Experiment # 1 Transpiration	65-71 72-88 06	<ul style="list-style-type: none"> ✓ Define transpiration. ✓ Explain process of transpiration through the plant leaves. ✓ Describe the factors that affect the transpiration. ✓ Explain transpiration and ground water. ✓ Describe the structure of an atom. ✓ Differentiate between atomic number and mass number. ✓ Draw diagram of the atomic structure of the first eighteen elements in the periodic table. ✓ Explain formation of ions. ✓ Differentiate between cations and anions. ✓ Describe isotopes and their uses in medicines and agriculture. ✓ Identify the types and number of elements present in simple molecules and compounds. ✓ State the law of constant composition and given examples.

<p>Month # 07</p>	<p>Chapter # 9 Refraction of Light</p> <p>Experiment # 7 Simple Electric Circuit</p> <p>Skill # 3 First Aid</p>	<p>118-128</p> <p>42</p> <p>79-88</p>	<ul style="list-style-type: none"> ✓ Explain the meaning of refraction. ✓ Explain refraction of light and its causes. ✓ Discuss the effects of refraction with examples. ✓ List the colours of light using a prism. ✓ Describe the law of refraction. ✓ Differentiate between physical and chemical changes. ✓ Identify the physical and chemical changes taking place in environment. ✓ Explain the use of hydrocarbons as fuels. ✓ Explain the physical and chemical properties of fertilizers, which make them useful in agriculture. ✓ Discuss harmful effects of improper use of fertilizers.
<p>Month # 08</p>	<p>Chapter # 10 Households Circuitry</p> <p>Skill # 5 Ecology</p>	<p>129-140</p> <p>95-96</p>	<ul style="list-style-type: none"> ✓ List the major uses of electricity in homes. ✓ List electrical hazards and precautionary measures to ensure the safe use of electricity at home. ✓ Describe why electricity is dangerous to humans.
<p>Month # 09</p>	<p>Chapter # 12 Air and Atmosphere</p> <p>Experiment # 8 Expansion of Air</p>	<p>154-164</p> <p>48</p>	<ul style="list-style-type: none"> ✓ Recognise the importance of air. ✓ Identify the composition of air. ✓ Relate the properties and uses of gases in air with the composition of air. ✓ Why air is considered a mixture.

Term wise & Month wise Distribution of Syllabus (Tentative 9-10 months)

Subject	Science	Class	VIII	Book	Innovative Science for Secondary Book 3 (Turnkey Publishers) Innovative Science Journal 8
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FIRST TERM

Number of months : 4-5

Tentative Number of Working Days: 85

Month	Chapters	Page #	Learning Outcomes
Month # 01	Chapter # 1 Human Organ System Chapter # 2 Heredity in organism Experiment # 1 Mechanism of Breathing Skill # 4 Nutrition	08-23 24-35 06 98-103	<ul style="list-style-type: none"> ✓ Describe the structure and functions of the nervous system. ✓ Describe the working of the nervous system through a model. ✓ Explain reflex action with an example ✓ Different between voluntary and involuntary action they have experienced. ✓ Define excretion. ✓ Draw and lable human excretory system. ✓ Describe the role of kidney in excretion of nitrogenous wastes. ✓ Investigate the possible causes of the malfunctioning of kidneys. ✓ Differentiate between mitosis and meiosis. ✓ Identify DNA and chromosomes in the cell diagram. ✓ Define heredity and recognize its importance in transferring of characteristics from parents to off spring. ✓ Identify the characteristics that can be transferred from parents to off spring. ✓ Compare characteristics related to ear and eye colour.

Month # 02	<p>Chapter # 5 Chemical Reaction</p> <p>Experiment # 5 Endothermic and Exothermic Reaction</p> <p>Skill # 1 Hygiene in Children</p>	<p>64-76</p> <p>31</p> <p>70-89</p>	<ul style="list-style-type: none"> ✓ Define rust. ✓ Explain the electrochemical. ✓ Describe the chemical reaction. ✓ Identify chemical reaction. ✓ Explain the electrode. ✓ Explain electrolyte
Month # 03	<p>Chapter # 7 Force and Pressure</p> <p>Chapter # 8 Sources and Effects of Heat Energy</p> <p>Experiment # 2 Importance of Calcium for strong Bones</p>	<p>91-105</p> <p>106-118</p> <p>12</p>	<ul style="list-style-type: none"> ✓ Define the term pressure. ✓ Identify the units of pressure. ✓ Explain hydraulics and hydraulic system by giving examples. ✓ Explain how gases behave under pressure. ✓ Describe the causes of gas pressure in a container. ✓ Explain the working of aerosols. ✓ Identify the application of gas pressure. ✓ Describe the term atmosphere pressure. ✓ Describe the sources and effect of heat. ✓ Explain thermal expansion of solids liquids and gases. ✓ Explore the effects and applications of expansion and contraction of solids. ✓ Explain the peculiar behaviour of water during contraction and expansion. ✓ Investigate the processes making use of thermal expansion of substance. ✓ Identify the damages caused by expansion and contraction in their surroundings and suggest ways to reduce these damages.
Month # 04	<p>Chapter # 12 Exploring Space</p> <p>Experiment # 7 Pascal Law</p> <p>Skill # 2 Mental Health</p>	<p>165-176</p> <p>47</p> <p>80-87</p>	<ul style="list-style-type: none"> ✓ Describe development of tools and technologies used in space exploration. ✓ Analyze the benefits generated by the technology of the space exploration ✓ Explain how astronauts survive and research in space. ✓ Suggest the ways to solve the problems that have resulted from space exploration. ✓ Identify the technological tools used in space exploration . ✓ Identify new technologies used on Earth that have developed as a result of the development of technology.

FINAL TERM Number of months: 4-5 Tentative Number of Working Days: 87

Month	Chapters	Page #	Learning Outcomes
Month # 05	Chapter # 3 Biotechnology Experiment # 3 Growing Population	36-49 18	<ul style="list-style-type: none"> ✓ Define rust. ✓ Explain the electrochemical. ✓ Describe the chemical reaction. ✓ Identify chemical reaction. ✓ Explain the electrode. ✓ Explain electrolyte
Month # 06	Chapter # 4 Pollutants and their Effects on Environment Chapter # 6 Acids, Bases and Salts Experiment # 6 Acids and Bases	50-63 77-90 39	<ul style="list-style-type: none"> ✓ Explain the sources, properties and harmful effect of air pollutants. ✓ List problems in human organ systems caused by air pollutants. ✓ Plan and conduct a campaign that can help to reduce air pollution in their local environment. ✓ Explain the green effect. ✓ Describe the cause and effect of ozone depletion. ✓ Carry out a research to explain global warming and its likely effects on life on earth. ✓ Design a model to explain the greenhouse effects. ✓ Explain the formation of acid rain and identify its consequences on living and non-living things. ✓ Define deforestation. ✓ State the effects of deforestation on the environment. ✓ Identify human activities that have long term adverse consequences on the environment. ✓ Define the terms acid,alkali and salt ✓ Describe the properties of acid ,alkalis and salt. ✓ Explain the uses of acids, alkalis and salts in daily life.

			<ul style="list-style-type: none"> ✓ Define indicators. ✓ Use indicators to identify acids,alkalis and neutral substances. ✓ Investigate the colour change in the extracts of various flowers vegetables by adding acids and alkalis.
Month # 07	<p>Chapter # 9 Lenses</p> <p>Experiment # 4 Electrolytes and Non-Electrolytes</p> <p>Skill # 3 First Aid</p>	<p>119-132</p> <p>25</p> <p>88-97</p>	<ul style="list-style-type: none"> ✓ Define lens. ✓ Differentiate between the different types of lenses. ✓ Describe the image formation using a lens by ray diagram. ✓ Compare and contrast the working of a human eye with the lens camera. ✓ Explain how eye focuses by altering the thickness of the eye lens.
Month # 08	<p>Chapter # 10 Circuit and Electric Current</p> <p>Experiment # 8 Make a Capacitor</p> <p>Skill # 5 Ecology</p>	<p>133-153</p> <p>53</p> <p>104-108</p>	<ul style="list-style-type: none"> ✓ Define current. ✓ Make a parallel and series circuits. ✓ Investigate about types of circuits used for different purposes. ✓ Identify a disadvantage of a series circuit. ✓ Differentiate between current and energy. ✓ Explain the effects of electric currents in daily use appliances. ✓ Describe voltage. ✓ Explain the resistance as an opposition of the flow of current. ✓ Describe the relationship between voltage and resistance.
Month # 09	<p>Chapter # 11 Dispersion of Light</p> <p>Experiment # 9 Electromagnet</p>	<p>154-164</p> <p>61</p>	<ul style="list-style-type: none"> ✓ Describe the dispersion of light by a prism. ✓ Identify different uses of light of different colours at home, school and explain the relationship of choice of colours to their purpose. ✓ Define spectrum of light. ✓ Identify primary colours and show how they are combined to form secondary colours. ✓ Identify a device in their surroundings that uses different combinations of colours.