

## The syllabus for Grade 07 - 2021 (100 periods)

### Grade 06 component for Grade 07 (36 periods)

**Competency: 3.0. Utilizes various forms of energy, their interaction with matter and energy transformations by maintaining efficiency and effectiveness at an optimum level.**

Competency level	Content	Outcomes	Time (Periods)	Special Notes
<p><b>3.1 Develops awareness about energy sources and their uses.</b></p> <p><b>3.2 Performs activities to illustrate the uses of certain energy sources.</b></p> <p><b>3.3 Accepts the importance of sustainable utilization of energy sources.</b></p>	<p><b>Energy in day-to-day life</b></p> <ul style="list-style-type: none"> <li>• Energy does work</li> <li>• Energy sources and their Uses                             <ul style="list-style-type: none"> <li>• Sun</li> <li>• Biomass</li> <li>• Fossil fuels</li> <li>• Wind</li> <li>• Hydropower</li> <li>• Sea waves</li> <li>• Tidal waves</li> <li>• Geothermal</li> <li>• Nuclear</li> </ul> </li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• State energy as ability of doing work.</li> <li>• Identify sun as the main source of energy.</li> <li>• Give a brief introduction to other sources of energy.</li> <li>• Describe the uses of energy sources with examples.</li> <li>• Realize the exhaustibility of energy sources.</li> <li>• Value the sustainable usage of energy.</li> </ul>	<p style="text-align: center;">02</p>	<p>No of periods have been reduced from 10 to 02.</p> <p>Conduct the lesson connecting to Grade 07, 3.5 competency level.</p> <p>Conduct simple introductions focusing on applications.</p>

				Conduct the lesson with the aid of photos, sketches and videos (Guru Gedara).
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<p><b>3.4 Illustrates the uses of light by simple activities.</b></p> <p><b>3.5 Explains the nature and functions of light using rays and beams.</b></p> <p><b>3.6 Explores various sources of light and the uses of light.</b></p> <p><b>3.7 Suggests possible explanations to show properties of light.</b></p>	<p><b>Light and vision</b></p> <ul style="list-style-type: none"> <li>• How we see</li> <li>• Need of light</li> <li>• From where the light comes <ul style="list-style-type: none"> <li>• Luminous objects</li> <li>• Non-luminous objects</li> </ul> </li> <li>• Transparent, translucent and opaque media <ul style="list-style-type: none"> <li>• Properties of light</li> <li>• Beam of light</li> <li>• Ray of light</li> <li>• Rectilinear propagation of light</li> </ul> </li> <li>• Uses of light <ul style="list-style-type: none"> <li>• Sight</li> <li>• Illumination</li> <li>• Signaling</li> <li>• Communication</li> <li>• Medical purposes</li> <li>• Entertainment</li> <li>• Food production in plants</li> </ul> </li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• Explain the factors necessary for vision.</li> <li>• Distinguish luminous and nonluminous objects giving examples.</li> <li>• Identify transparent, translucent and opaque media according to the transmission of light.</li> <li>• Express that the ray as an idealized narrow beam of light.</li> <li>• Compile a report on uses of light.</li> <li>• Distinguish the beam of light and a ray of light diagrammatically.</li> <li>• Conduct simple activities to demonstrate the need of light for vision.</li> <li>• Build up small set-ups to illustrate certain uses of light.</li> <li>• Demonstrate a beam of light by simple activities.</li> <li>• Demonstrate rectilinear propagation of light by simple activities.</li> <li>• Appreciate the importance of light.</li> <li>• Accept that light should be used without disturbing others.</li> </ul>	<p>05</p>	<p>No of periods have been reduced from 15 to 05.</p> <p>Conduct simple introductions on each topic focusing on applications.</p> <p>Conduct all activities through teacher demonstrations.</p> <p>Conduct the lesson with the aid of photos, sketches and videos (Guru Gedara).</p> <p>Guide students to compile the report on 'uses of light' at home.</p>
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<p><b>3.8 Develops the concept 'sound' with the help of different sounds in the environment.</b></p> <p><b>3.9 Describes the principal differences between various types of sound.</b></p>	<p><b>Sound and hearing</b></p> <ul style="list-style-type: none"> <li>• Sound as the sensation received by hearing organs/ear</li> <li>• Sounds in environment <ul style="list-style-type: none"> <li>• Natural sounds</li> <li>• Artificial sounds</li> </ul> </li> <li>• Noise and music</li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• Identify sound as the sensation received by hearing organs/ear.</li> <li>• Give examples for different sounds existing in the environment.</li> <li>• Perform simple activities to experience the varieties of sound.</li> <li>• Distinguish sound in environment as natural and artificial.</li> <li>• Differentiate noise and music by experiencing various sounds.</li> <li>• Enjoy music and natural sounds.</li> <li>• Accept that sound should be used without disturbing others.</li> </ul>	<p>03</p>	<p>No of periods have been reduced from 08 to 03.</p> <p>Conduct the lesson connecting to Grade 07, 3.8 competency level.</p> <p>Conduct all activities through teacher demonstrations</p>
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<p><b>3.10 Argues a case for a magnetic effect.</b></p> <p><b>3.11 Formulates appropriate methods to show the behaviour of magnets.</b></p>	<p><b>Magnets</b></p> <ul style="list-style-type: none"> <li>• Magnetic effect</li> <li>• Magnetic poles <ul style="list-style-type: none"> <li>• Attraction</li> <li>• Repulsion</li> </ul> </li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• Understand that magnets exert a force on certain substances.</li> <li>• Identify magnets and their poles.</li> <li>• State that like poles repel and unlike poles attract.</li> <li>• Perform activities to demonstrate attraction and repulsion of magnets.</li> <li>• Use repulsion to differentiate a magnet from other magnetic substances</li> <li>• Identify poles of a magnet using the compass.</li> <li>• Accept that magnets can be used for joyful activities</li> </ul>	<p>04</p>	<p>No of periods have been reduced from 08 to 04.</p> <p>Conduct all activities through teacher demonstrations</p> <p>Conduct the lesson with the aid of photos, sketches and videos (Guru Gedara).</p>
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<p><b>3.12 Identifies sources of electricity from various resources.</b></p> <p><b>3.13 Illustrates circuit diagrams using standard symbols.</b></p> <p><b>3.14 Distinguishes conductors and insulators practically.</b></p>	<p><b>Electricity for comfortable life</b></p> <ul style="list-style-type: none"> <li>• Electricity for day- to-day life</li> <li>• Generating electricity</li> <li>• Introduction of electric circuits, their components and their symbols <ul style="list-style-type: none"> <li>• Wires</li> <li>• Switch</li> <li>• Bulb</li> <li>• Cell/Battery</li> <li>• Ammeter</li> </ul> </li> <li>• Conductors and insulators</li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• State, uses of / electricity in day-to-day life.</li> <li>• State few electricity generating devices.</li> <li>• Identify components in an electric circuit by manipulating them correctly.</li> <li>• Denote components of an electrical circuit by standard symbols.</li> <li>• Present information on electricity generating devices.</li> <li>• Conduct simple activities to generate electricity.</li> <li>• Connect and work out simple electric circuits according to the given circuit diagrams.</li> <li>• Identify electrical conductors and insulators by performing simple activities.</li> </ul>	<p>06</p>	<p>No of periods have been reduced from 20 to 06.</p> <p>Conduct all activities through teacher demonstrations</p> <p>Conduct the lesson with the aid of photos, sketches and videos (Guru Gedara).</p>
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<p><b>3.15 Search for the methods of generating heat.</b></p> <p><b>3.16 Demonstrate the effects of heat.</b></p> <p><b>3.17 Inquires about the instances where effects of heat are experienced in the environment.</b></p>	<p><b>Heat and its effects</b></p> <ul style="list-style-type: none"> <li>• How heat helps life</li> <li>• Effects of heat <ul style="list-style-type: none"> <li>• Raising temperature</li> <li>• Expansion</li> <li>• Change of state</li> <li>• Change of colour</li> </ul> </li> <li>• Generation of heat</li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• List out uses of heat in day-to-day life.</li> <li>• Give examples for effects of heat experienced in the environment.</li> <li>• Perform simple activities to demonstrate the effects of heat.</li> <li>• Conduct simple activities to demonstrate the ways of generating heat.</li> <li>• Accept that heat should be handled safely and productively.</li> <li>• Realize that heat affects the properties of substances and products.</li> </ul>	<p>05</p>	<p>No of periods have been reduced from 08 to 05.</p> <p>Conduct all activities with systematic pre-prepared teacher demonstrations.</p> <p>Conduct the lesson with the aid of photos, sketches and videos (Guru Gedara).</p>
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**Competency: 4.0. Explores nature, properties and processes of earth and space by understanding natural phenomena for intelligent and sustainable utilization.**

Competency level	Content	Outcomes	Time (Periods)	Special Notes
<p><b>4.1. Judges interactions among the organisms according to their food habits.</b></p> <p><b>4.2. Categorizes organisms according to their mode of nutrition.</b></p>	<p><b>Food - related interactions</b></p> <ul style="list-style-type: none"> <li>• Mode of nutrition               <ul style="list-style-type: none"> <li>• Herbivorous</li> <li>• Carnivorous</li> <li>• Omnivorous</li> </ul> </li> <li>• Food -related interactions               <ul style="list-style-type: none"> <li>• Food chains</li> <li>• Food webs</li> </ul> </li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• Categorize animals as herbivores, carnivores and omnivores according to their food habits.</li> <li>• Understand that all animals directly or indirectly depend on plants for food.</li> <li>• Describe food chains and food webs as an interaction among plants and animals.</li> <li>• Identify the hierarchy of food related interactions in nature.</li> <li>• Develop food chains through observations and experiences.</li> <li>• Build up food webs using the inter-connections between food chains.</li> <li>• Highlight food chains in a given food web.</li> <li>• Accept that each and every organism plays a key role in the balanced environment.</li> <li>• Act responsibly not to disturb the natural balance of the food webs.</li> </ul>	<p>05</p>	<p>No of periods have been reduced from 15 to 05.</p> <p>Conduct the lesson in discussion form together with the aid of photos, sketches and videos (Guru Gedara).</p>



<p><b>4.3.Develops awareness about changes in weather and associated natural disasters.</b></p> <p><b>4.4.Observes factors that determine weather.</b></p>	<p><b>Climatic changes</b></p> <ul style="list-style-type: none"> <li>• Weather and climate</li> <li>• Factors determining weather <ul style="list-style-type: none"> <li>• Rain</li> <li>• Wind</li> <li>• Temperature</li> <li>• Humidity</li> </ul> </li> <li>• Natural disasters associated with climatic changes <ul style="list-style-type: none"> <li>• Flood</li> <li>• Cyclone</li> <li>• Drought</li> <li>• Landslide</li> <li>• Thunder</li> </ul> </li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• Differentiate weather and climate.</li> <li>• Name some factors that determine weather.</li> <li>• List out some natural disasters associated with climatic changes.</li> <li>• Construct simple set ups to observe changes in rainfall, wind direction, wind speed and humidity.</li> <li>• Use simple set ups and standard instruments to observe and record changes in weather.</li> <li>• Record observed changes in weather for a given period.</li> <li>• Realize the importance of awareness of weather conditions.</li> </ul>	<p>06</p>	<p>No of periods have been reduced from 15 to 06.</p> <p>Conduct all activities through teacher demonstrations.</p> <p>Conduct the lesson in discussion form together with the aid of photos, sketches and videos Guru Gedara).</p> <p>Guide students to record observed changes in weather for a given period as a home assignment.</p>
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**Grade 07 component for grade 07 (64 periods)**

**Competency: 1.0. Explores life and life processes in order to improve the productivity of biological systems.**

Competency level	Content	Outcomes	Time (periods)	Special Notes
<p><b>1.1 Investigates morphological features of flowering plants.</b></p> <p><b>1.2 Investigates the diversity of major parts of flowering plants.</b></p>	<ul style="list-style-type: none"> <li>• Morphological features of flowering plants               <ul style="list-style-type: none"> <li>• Parts of plants</li> <li>• Different types of seeds, fruits, roots, stems, leaves,</li> </ul> </li> <li>• Parts of a flower (dicot)</li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• State examples of flowering and non-flowering plants.</li> <li>• Name the major parts of flowering plants.</li> <li>• Express the diversity of seeds, fruits, roots, stems and leaves.</li> <li>• Differentiate between monocot and dicot plants using specimens.</li> <li>• Appreciate the diversity of organisms.</li> </ul>	<p>04</p>	<p>No of periods have been reduced from 10 to 04.</p> <p>Conduct the lesson with the aid of photos, sketches and videos (Guru Gedara).</p> <p>Conduct all activities through teacher demonstrations.</p> <p>Major parts of flowering plants and their functions will be delivered in higher grades (8 and 10).</p>

<p><b>1.3 Gives criteria to distinguish vertebrates from invertebrates.</b></p> <p><b>1.4 Investigates adaptations of organisms to their environments.</b></p>	<ul style="list-style-type: none"> <li>• <b>Animals</b> <ul style="list-style-type: none"> <li>• External features of animals (Using a typical vertebrate and an invertebrate)</li> <li>• Adaptations to different environments- Shape,Color</li> </ul> </li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• Compare vertebrates and invertebrates with respect to their unique characteristics.</li> <li>• Explain adaptations of organisms to their environment with relevant examples.</li> <li>• Appreciate the diversity of animals.</li> </ul>	<p>03</p>	<p>No of periods have been reduced from 08 to 03.</p> <p>Conduct the lesson in discussion form together with the aid of photos, sketches and videos (Guru Gedara).</p>
<p><b>1.5 Uses dichotomous key to group organisms.</b></p>	<ul style="list-style-type: none"> <li>• Classification – (based on dichotomous keys)</li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• State that dichotomous keys can be used to group organisms.</li> <li>• Use dichotomous keys to group plants and animals.</li> </ul>	<p>02</p>	<p>No of periods have been reduced from 03 to 02.</p> <p>Use only prominent external features.</p>

<p><b>1.6 Uses the microscope correctly.</b></p>	<ul style="list-style-type: none"> <li>• Some important tools of a biologist <ul style="list-style-type: none"> <li>• Simple microscope</li> <li>• Compound microscope</li> <li>• Electron microscope (introduction only)</li> <li>• Magnification and resolution power of a microscope (introduction only)</li> </ul> </li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• Identify major parts of simple and compound microscopes.</li> <li>• Describe functions of different parts of a compound microscope.</li> <li>• Explain the importance of using electron microscope in the field of biology.</li> <li>• Express the terms magnification and resolution power.</li> <li>• Observe plant and animal cells properly under the microscope.</li> <li>• Accept that microscope should be handled carefully.</li> </ul>	<p>03</p>	<p>No of periods have been reduced from 08 to 03.</p> <p>Conduct all activities through teacher demonstrations.</p> <p>Conduct the lesson with the aid of photos, sketches and videos (Guru Gedara).</p>
<p><b>1.7. Explores levels of organization of life.</b></p> <p><b>1.8 Explores structural and functional relationships related to the human digestive</b></p>	<ul style="list-style-type: none"> <li>• Levels of organization <ul style="list-style-type: none"> <li>• Cell</li> <li>• Tissue</li> <li>• Organ</li> <li>• System</li> <li>• Organism</li> </ul> </li> <li>• Digestive system</li> <li>• Respiratory system</li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• State that there is a hierarchy in the organization up to the organism level.</li> <li>• Observe organisms using specimens to identify different levels of organization.</li> <li>• Explain the structure of the human digestive system using diagrams.</li> <li>• Explain the structure of the human respiratory system using diagrams.</li> <li>• Appreciate the complexity of organization of the living world.</li> </ul>	<p>03</p>	<p>No of periods have been reduced from 08 to 03.</p> <p>Conduct all activities through teacher demonstrations.</p> <p>Conduct the lesson with the aid</p>

<p>system and the respiratory system.</p>				<p>of photos, sketches and videos (Guru Gedara).</p>
<p><b>1.9 Conducts simple experiments to identify nutritious constituents of food.</b></p>	<ul style="list-style-type: none"> <li>• Food nutrients</li> <li>• Food tests</li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• State that food contains nutrients such as carbohydrates, proteins, lipids, vitamins and minerals.</li> <li>• Give examples of items of food rich in carbohydrates, proteins, lipids, vitamins and minerals.</li> <li>• Conduct simple tests to identify starch, protein and lipids.</li> <li>• State that a balanced diet contains all nutrients needed in sufficient quantities.</li> </ul>	<p>03</p>	<p>No of periods have been reduced from 08 to 03.</p> <p>Conduct all activities through teacher demonstrations.</p> <p>Conduct the lesson with the aid of photos, sketches and videos (Guru Gedara).</p>

**Competency: 2.0. Investigates matter, properties of matter and their interaction to enhance the quality of life.**

Competency level	Content	Outcomes	Time (periods)	Special Notes
<b>2.1 Demonstrates the functions of water.</b>	<ul style="list-style-type: none"> <li>• Functions of water as               <ul style="list-style-type: none"> <li>• a solvent</li> <li>• a coolant</li> <li>• a medium</li> </ul> </li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• Give examples of the usage of water as a solvent, a coolant and a medium.</li> <li>• Point out the importance of water as a medium for life.</li> <li>• Demonstrate functions of water as a solvent, and a coolant.</li> <li>• Appreciate the importance of water as a solvent, a coolant and a medium.</li> </ul>	02	<p>No of periods have been reduced from 06 to 02.</p> <p>Connect the lesson component with day-to-day experiences and conduct the lesson with the aid of photos, sketches and videos (Guru Gedara).</p>

<p><b>2.2 Identify acidic and basic substances that are used in day-to-day life.</b></p>	<ul style="list-style-type: none"> <li>• Acids and bases <ul style="list-style-type: none"> <li>• Identification of acids and bases using indicators</li> <li>• Acids and bases available at home and in the school laboratory</li> </ul> </li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• State that there are substances which can be used to differentiate between acids and bases.</li> <li>• List acidic and basic substances that are available at home and in the school laboratory.</li> <li>• Name substances that are not either acidic or basic as neutral substances.</li> <li>• Observe color changes occurring in different solutions in the presence of given plant extracts.</li> <li>• Differentiate between given substances as acids and bases using litmus and pH paper.</li> <li>• Accept that substances can be categorized based on their acidic, basic or neutral nature.</li> </ul>	<p>03</p>	<p>No of periods have been reduced from 07 to 03.</p> <p>Conduct all activities through systematic pre-prepared teacher demonstrations.</p> <p>Conduct the lesson with the aid of photos, sketches and videos (Guru Gedara).</p>
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**Competency: 3.0. Utilizes various forms of energy, their interaction with matter and energy transformations by maintaining efficiency and effectiveness at an optimum level.**

Competency level	Content	Outcomes	Time (periods)	Special Notes
<p><b>3.1 Develops concepts related to static electricity.</b></p> <p><b>3.2 Demonstrates applications of basic principles related to static electricity.</b></p>	<ul style="list-style-type: none"> <li>• Static electricity               <ul style="list-style-type: none"> <li>• Charging an object</li> <li>• Attraction and repulsion</li> </ul> </li> <li>• Electric charges               <ul style="list-style-type: none"> <li>• Positive charges</li> <li>• Negative charges</li> </ul> </li> <li>• Capacitors               <ul style="list-style-type: none"> <li>• Charging and discharging</li> </ul> </li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• Express the ways of generating positive and negative charges in objects using the convention.</li> <li>• State that there are two types of electrical charges namely positive and negative.</li> <li>• Design and conduct activities to show that there are two different types of electrical charges by showing attraction and repulsion.</li> <li>• State that the capacitor is a device used to store electrostatic charges temporarily.</li> <li>• Conduct an activity to show charging and discharging properties of a capacitor.</li> </ul>	<p>03</p>	<p>No of periods have been reduced from 08 to 03.</p> <p>Conduct all activities through systematic pre-prepared teacher demonstrations.</p> <p>Conduct the lesson with the aid of photos, sketches and videos (Guru Gedara).</p>



<p><b>3.3 Demonstrates electromagnetic induction.</b></p> <p><b>3.4 Conducts simple activities related to generation of electricity.</b></p>	<ul style="list-style-type: none"> <li>• Electric sources <ul style="list-style-type: none"> <li>• Chemical cell</li> <li>• Dynamo</li> <li>• Solar cell</li> </ul> </li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• List various chemical cells.</li> <li>• State that electromagnetic induction is the principle of the dynamo.</li> <li>• Identify the solar cell as a source of electricity.</li> <li>• Construct a simple cell to generate electricity.</li> <li>• Demonstrate the phenomenon of electromagnetic induction.</li> <li>• Conduct simple activities using solar panels.</li> <li>• Accept that electric sources can be used in innovative ways.</li> </ul>	<p>05</p>	<p>No of periods have been reduced from 10 to 05.</p> <p>Conduct all activities through systematic pre-prepared teacher demonstrations.</p> <p>Conduct the lesson with the aid of photos, sketches and videos (Guru Gedara).</p> <p>Differences between Alternative Current and Direct Current are discussed in Grade 11.</p>
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<p><b>3.5 Conducts simple activities to demonstrate the usage of forms of energy.</b></p>	<ul style="list-style-type: none"> <li>• Forms of energy <ul style="list-style-type: none"> <li>• Mechanical</li> <li>• Electrical</li> <li>• Sound</li> <li>• Light</li> <li>• Thermal</li> <li>• Chemical</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Give examples of various forms of energy.</li> <li>• List different devices that use various forms of energy.</li> <li>• Demonstrate various forms of energy in usage based on simple activities.</li> <li>• Appreciate the uses of different forms of energy.</li> </ul>	<p>03</p>	<p>No of periods have been reduced from 08 to 03.</p> <p>Conduct all activities through teacher demonstrations</p> <p>Conduct the lesson with the aid of photos, sketches and videos (Guru Gedara).</p>
<p><b>3.6 Demonstrates phenomena related to formation of shadows.</b></p> <p><b>3.7 Conducts simple activities to demonstrate the nature of images formed by mirrors.</b></p>	<ul style="list-style-type: none"> <li>• Light <ul style="list-style-type: none"> <li>• Formation of shadows</li> <li>• Image forming <ul style="list-style-type: none"> <li>• Plane mirror</li> <li>• Curved mirror</li> </ul> </li> </ul> </li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• Describe factors affecting formation of shadows.</li> <li>• Describe the nature of images formed in plane mirrors and curved mirrors.</li> <li>• State the uses of different types of mirrors.</li> <li>• Demonstrate formation of the shadow by an opaque object.</li> <li>• Design activities to demonstrate umbra and penumbra.</li> <li>• Conduct simple activities to demonstrate</li> </ul>	<p>06</p>	<p>No of periods have been reduced from 10 to 06.</p> <p>Conduct all activities through teacher demonstrations.</p>

		<p>nature of shadows using converging, diverging and parallel light beams.</p> <ul style="list-style-type: none"> <li>• Accept that the formation of shadows and images are different phenomena.</li> </ul>		<p>Conduct the lesson with the aid of photos, sketches and videos (Guru Gedara).</p>
<p><b>3.8 Conducts simple experiments related to the generation and propagation of sound.</b></p>	<ul style="list-style-type: none"> <li>• Sound <ul style="list-style-type: none"> <li>• Origin of sound (vibration)</li> <li>• Propagation of sound <ul style="list-style-type: none"> <li>• Speed</li> <li>• Medium</li> </ul> </li> </ul> </li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• Express that sound is generated by vibration.</li> <li>• State that a medium is necessary for the propagation of sound.</li> <li>• Explain that the speed of sound is different in different media.</li> <li>• Design and conduct activities to show the propagation of sound is different in different media.</li> <li>• Accept that sound is generated by vibration.</li> <li>• Accept that the medium affects the speed of sound.</li> </ul>	<p>03</p>	<p>No of periods have been reduced from 07 to 03.</p> <p>Conduct all activities through teacher demonstrations.</p> <p>Conduct the lesson with the aid of videos (Guru Gedara).</p>

<p><b>3.9 Uses thermometer correctly.</b></p> <p><b>3.10 Demonstrates transference of heat and its effects.</b></p>	<ul style="list-style-type: none"> <li>• Heat and temperature <ul style="list-style-type: none"> <li>• Measuring temperature</li> <li>• Thermometer and units of temperature</li> </ul> </li> <li>• Transference of heat <ul style="list-style-type: none"> <li>• Conduction</li> <li>• Convection</li> <li>• Radiation</li> </ul> </li> <li>• Land breeze and sea breeze</li> </ul>	<ul style="list-style-type: none"> <li>• State that there are different types of thermometers based on the liquid (thermometric substance) used in the scale.</li> <li>• Express the units of temperature as degree Celsius, degree Fahrenheit and Kelvin.</li> <li>• Express the terms 'boiling point' and 'melting point'.</li> <li>• State that human body temperature is constant (37°C) and clinical thermometer could be used to diagnose feverish conditions.</li> <li>• Explain the methods of transference of heat.</li> <li>• Describe land breeze and sea breeze using convection.</li> <li>• Use a Celsius thermometer correctly to measure temperature of air, water and soil.</li> <li>• Use a clinical thermometer correctly to measure body temperature.</li> <li>• Conduct simple activities to demonstrate conduction, convection and radiation of heat.</li> <li>• Accept that proper handling of instruments and taking measurements accurately is important in day-to-day life.</li> </ul>	<p>07</p>	<p>No of periods have been reduced from 10 to 07.</p> <p>Conduct all activities through teacher demonstrations.</p> <p>Conduct the lesson with the aid of videos (Guru Gedara).</p>
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<p><b>3.11 Conduct simple experiments to demonstrate distance, displacement and force by understanding relevant concepts.</b></p>	<ul style="list-style-type: none"> <li>• Force and motion <ul style="list-style-type: none"> <li>• Distance and displacement</li> <li>• Force</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Give examples of distance and displacement.</li> <li>• Differentiate between the concepts of distance and displacement.</li> <li>• State units of distance and displacement.</li> <li>• Describe force as a push or a pull giving examples.</li> <li>• State that force could be expressed in terms of a magnitude and direction.</li> <li>• State the SI unit of force as 'newton'.</li> <li>• Conduct simple activities to differentiate between the concepts of distance and displacement.</li> <li>• Design simple activities to demonstrate force as a push or a pull.</li> <li>• Accept the importance of force in day-to-day life.</li> </ul>	<p>03</p>	<p>No of periods have been reduced from 08 to 03.</p> <p>Conduct all activities through systematic pre-prepared teacher demonstrations.</p> <p>Conduct the lesson with the aid of photos, sketches and videos (Guru Gedara).</p>
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**Competency: 4.0. Explores nature, properties and processes of earth and space by understanding natural phenomena for intelligent and sustainable utilization.**

Competency level	Content	Outcomes	Time (periods)	Special Notes
<b>4.1 Constructs and uses models to demonstrate the structure of the earth.</b>	<ul style="list-style-type: none"> <li>• The planet earth</li> <li>• Structure of the Earth</li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• Describe core, mantle and crust of the earth.</li> <li>• Demonstrate the structure of the earth's interior using suitable activities.</li> <li>• Accept that the earth's crust is dynamic.</li> </ul>	<p>02</p>	<p>No of periods have been reduced from 08 to 02.</p> <p>Conduct all activities through systematic pre-prepared teacher demonstrations.</p> <p>Conduct the lesson with the aid of photos, sketches and videos (Guru Gedara).</p> <p>Plate tectonic component is removed due to its complexity.</p>

<p><b>4.2 Shows knowledge on the atmosphere.</b></p>	<ul style="list-style-type: none"> <li>• Atmosphere <ul style="list-style-type: none"> <li>• Layers of atmosphere</li> <li>• Air and its composition</li> </ul> </li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• Describe the variation of pressure and temperature qualitatively across the layers of the atmosphere.</li> <li>• State the composition of the air in the troposphere (lower atmosphere).</li> <li>• Realize the importance of atmosphere for the existence of life on earth.</li> </ul>	<p>02</p>	<p>No of periods have been reduced from 08 to 02.</p> <p>Conduct the lesson with simple introductions.</p>
<p><b>4.3 Conducts simple activities to investigate structure and components of soil.</b></p>	<ul style="list-style-type: none"> <li>• Soil <ul style="list-style-type: none"> <li>• Types</li> <li>• Composition of soil <ul style="list-style-type: none"> <li>• Soil air, soil water, soil organisms, decaying matters</li> </ul> </li> <li>• Soil erosion</li> </ul> </li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• Name soil types.</li> <li>• Compare and contrast different soil types.</li> <li>• State the composition of soil.</li> <li>• Describe constituents of soil and their functions.</li> <li>• Describe soil erosion.</li> </ul>	<p>03</p>	<p>No of periods have been reduced from 10 to 03.</p> <p>Conduct the lesson with the aid of photos, sketches and videos (Guru Gedara).</p>

<p><b>4.4 Exhibits knowledge on the importance of minerals and rocks as natural resources.</b></p>	<ul style="list-style-type: none"> <li>• Rocks and minerals <ul style="list-style-type: none"> <li>• Characteristics</li> <li>• Types of rocks and minerals</li> <li>• Weathering of rocks</li> <li>• Rock cycle</li> </ul> </li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• State characteristics of rocks and minerals.</li> <li>• Differentiate between rocks and minerals.</li> <li>• Explain mechanisms of weathering of rocks.</li> <li>• Explain rock cycle.</li> <li>• Realize the importance of rocks and minerals as natural resources.</li> <li>• Accept that rocks and minerals are limited and should be used sustainably.</li> </ul>	<p>03</p>	<p>No of periods have been reduced from 05 to 03.</p> <p>Conduct the lesson with the aid of photos, sketches and videos (Guru Gedara).</p>
<p><b>4.5 Takes necessary action to use sources of energy sustainably.</b></p>	<ul style="list-style-type: none"> <li>• Energy sources <ul style="list-style-type: none"> <li>• Renewable</li> <li>• Non-renewable</li> </ul> </li> </ul>	<p><b>Students will be able to;</b></p> <ul style="list-style-type: none"> <li>• Describe the terms 'renewable sources of energy' and 'non-renewable sources of energy'.</li> <li>• Give examples for renewable and non-renewable sources of energy.</li> <li>• Accepts the importance of sustainable use of sources of energy.</li> </ul>	<p>01</p>	<p>No of periods have been reduced from 05 to 01.</p> <p>Conduct the lesson with the aid of photos, sketches and videos (Guru Gedara).</p>