

GRADE 5 – QUARTER 1: MATERIALS

Content	Content Standards <i>The learners learn that:</i>	Learning Competency <i>The learners...</i>
1. Matter in daily life 2. Matter and the three states 3. Scientific investigation	1. Scientists identify three states of matter based on shape and volume. 2. Temperature can cause changes of state. 3. Planned simple scientific investigations require several steps and processes. 4. An understanding of matter can be applied to solve real world problems.	1. describe matter as anything that has mass and takes up space; 2. identify that matter has (exists in) three states called solids, liquids, and gases; 3. describe the properties of solids, liquids, and gases in terms of shape and volume: <ol style="list-style-type: none"> solids: definite shape and volume liquids: no definite shape; definite volume gases: no definite shape or volume; 4. identify objects at home and in the classroom as solid, liquid or gas; 5. use measuring cylinders or beakers to measure volume using units, such as milliliters (mL), and liters (L); 6. describe how changes in temperature cause matter to change in state, such as solid to liquid to gas; 7. describe the steps of a simple science investigation: <ol style="list-style-type: none"> What is the problem? What materials do you need? What do you need to do? What have you found out/learned?; 8. identify and appropriately use units in simple science activities, such as milligrams (mg), grams (g), kilograms (kg), and degrees centigrade (°C); and 9. plan simple scientific investigations in answering questions, such as “Do gases (like air) or liquids (like water) have mass?”, using appropriate simple science equipment, such as a balance, and a thermometer, with appropriate units.
Performance Standard <i>By the end of the Quarter, learners describe three states of matter based on properties of shape and volume and identify that heat is involved in changes of state. They plan a simple scientific investigation following appropriate steps and using units such as milliliters, liters, grams, kilograms, and degrees Celsius for measuring.</i>		
Suggested Performance Task Plan and carry out a scientific investigation on a simple everyday problem such as “do gases have weight”?		

GRADE 5 – QUARTER 2: LIVING THINGS

Content	Content Standards <i>Learners learn that:</i>	Learning Competency <i>The learners...</i>
1. Body systems in animals 2. Plants, animals, and microorganisms 3. Life cycles of living things 4. Specialized structures in plants.	1. Animals have systems that help them grow, respond, and reproduce. 2. Living things can be grouped as plants, animals, and microorganisms based on their characteristics. 3. The life cycles of plants and animals allow them to survive and reproduce. 4. Plants have specialized structures that help them overcome unfavorable conditions.	1. identify from pictures and labeled diagrams the parts of the digestive system as mouth, gullet, stomach, small intestine, and large intestine, and describe how they work; 2. identify from pictures and diagrams the parts of the respiratory system as the nose, windpipe, and lungs, and describe how they work; 3. identify from pictures and labeled diagrams the parts of the female reproductive system as ovaries, uterus, and vagina and those of the male reproductive system as the prostate, testis, and penis and describe how they work; 4. use a table to show how living things can be classified into groups based on similar characteristics: <ul style="list-style-type: none"> a. plants including flowering and non-flowering; b. animals including mammals, reptiles, insects, birds, fish, amphibians, and reptiles; c. microorganisms including fungi and bacteria; 5. identify which groups of animals reproduce by giving birth to live young, such as mammals, and which reproduce by laying eggs, such as birds and reptiles; 6. compare the life cycles of mammals from birth to adulthood, birds from egg to a mature organism, and plants from seed to a young plant, and then to a mature plant; 7. describe the purpose of specialized structures in plants, such as rhizomes, tubers, thorns, bulbs, and aerial roots; 8. explain how some plants have adapted to unfavorable conditions in the environment, such as lack of rain or floods; and 9. use information from secondary sources to describe examples of how some animals have changed to better suit their environment, such as mimicry or camouflage.
Performance Standard <i>By the end of the Quarter, learners describe and create models of the body systems whose function is to help humans grow, develop, and reproduce. They use tables to group living things as plants, animals, or microorganisms. They use skills of observation, predicting, measuring, and recording to plan and carry out a simple activity to observe the life cycle of a plant and compare it to the life cycles of animals.</i>		
Suggested Performance Tasks A. Make a model using local recyclable materials of one of the human body systems to show how it works. B. Set up a simple science activity to observe and record the changes in plants as they grow from seed to maturity.		

GRADE 5 – QUARTER 3: FORCE, MOTION, AND ENERGY

Content	Content Standards <i>The learners learn that:</i>	Learning Competencies <i>The learners...</i>
1. Contact and non-contact forces 2. Investigating scientifically 3. Friction 4. Gravity 5. Static electricity 6. Conductors, insulators, and simple circuits	1. Science investigations provide evidence to support predictions and explanations. 2. Forces are pushes or pulls that act in a specific direction. 3. Friction is an everyday force created by two surfaces interacting. 4. Gravity causes all objects to fall towards the ground. 5. Static electricity occurs when some materials rub on other materials causing charges to jump. 6. Electric current requires a pathway for charges to flow.	1. carry out simple investigations to demonstrate that contact forces cause objects to move in the same direction as the direction that the force is applied; 2. plan and carry out a scientific investigation to determine the effect of different surfaces on the size of frictional forces; 3. demonstrate how friction can produce heat and investigate ways of reducing and increasing friction; 4. identify gravity as a non-contact force that affects the behaviors of materials and objects on Earth in predictable ways; 5. predict and explain whether heavier objects will fall faster than lighter objects due to the force of gravity; 6. observe and describe the effects of gravity to the motion of an object; 7. investigate the effects of static electricity using common materials, such as a comb, plastic and glass rods, and balloons; 8. assemble and draw a simple circuit using batteries, wires, switch, and bulb and/or toy motor or buzzer; 9. design and construct a simple electrical circuit to identify what materials will conduct electricity and use it to identify materials from the environment that will and will not conduct electricity; and 10. make a simple electromagnet and observe and record its properties.
<p>Performance Standard <i>By the end of the Quarter, learners use objectivity and measurement to carry out scientific investigations using fair tests and multiple trials to explore how forces influence the movement of familiar objects and extend their understanding to predict how gravity affects objects on Earth. They plan and carry out valid and reliable scientific investigations to explore frictional forces by identifying and controlling variables. They observe and describe basic features of static electricity and electric current through practical activities and use their understanding and interest to explain and show appreciation for some applications of forces and electrical energy in the home and community.</i></p>		
<p>Suggested Performance Tasks A. Develop a graphic organizer, such as a concept map or Venn diagram, to show the similarities and differences between contact forces and non-contact forces. Include examples of situations and materials that demonstrate contact and non-contact forces and suggest ways these could be used to improve everyday life in the community. B. Set up an inclined plane for toy cars, and apply the concept of friction to stop the toy car as fast as possible after it moves past the inclined plane. C. Develop a graphic organizer, such as a concept map or Venn diagram, to compare and contrast conductors and insulators of electricity. Include examples of materials that conduct and insulate and suggest ways that recycled materials could be used to develop better conductors and insulators.</p>		

GRADE 5 – QUARTER 4: EARTH AND SPACE

Content	Content Standards <i>The learners learn that:</i>	Learning Competencies <i>The learners...</i>
1. Landforms, rocks and minerals 2. Weathering and erosion 3. Using models 4. The Water Cycle 5. Weather disturbances 6. The Solar System	1. Landforms influence living and non-living components of the environment. 2. Rocks are composed of grains of minerals that break down to form soil. 3. Weathering and erosion shape the Earth’s surface by breaking down and transporting rocks. 4. The Water Cycle includes processes of evaporation, precipitation and transportation. 5. Weather disturbances feature low pressure, strong winds, and storms. 6. The planets and moons vary in physical features and composition. 7. Phases of the Moon depend on its position relative to Earth and Sun.	1. identify local examples of natural landforms and bodies of water such as mountains, valleys, rivers, and coastlines, and describe how they influence non-living and living components of the environment; 2. explore the school grounds or the local area to observe or collect different types of rocks, describing their similarities and differences in terms of their features, such as texture, color, and grain crystal size; 3. classify common rocks from provided samples using a simple rock classification system, such as a dichotomous key; 4. explain how soil is formed from rocks and minerals; 5. demonstrate how erosion transports Earth materials; 6. explain the role of the water cycle in the environment; 7. construct a model to communicate some of the key processes in the water cycle; 8. describe some effects of weather disturbances that occur in or near the Philippines; 9. describe the weather conditions according to a Public Storm Warning Signal issued by the Philippine Atmospheric, Geological and Astronomical Services Administration (PAGASA); 10. describe typical weather conditions before, during and after a tropical cyclone; 11. describe the general structure of the solar system, identifying the names of the major celestial objects, their main features, and general composition; and; 12. make drawings or a simple model to show the motion of the Earth and Moon relative to the Sun to explain the phases of the moon that people see from Earth.
Performance Standard <i>By the end of the Quarter, learners relate changes in landforms and earth materials to processes and effects of the water cycle. They explain causes and impacts of extreme weather and identify appropriate and safe ways to respond to such events. They demonstrate curiosity as they make detailed observations guided by science classification systems and demonstrate creativity in communicating information about earth processes to other people. They show an appreciation of the scale of space in describing the features of the solar system and use models to communicate significant relationships and movements.</i>		
Suggested Performance Tasks A. Create a video of a weather report or act out a TV weather broadcast segment explaining a weather disturbance. B. Construct a scale model of the sun and the inner planets of the solar system showing the planet’s relative sizes and distances from the sun.		