K to 12 BASIC EDUCATION CURRICULUM SPIRALLING OF CONCEPTS GRADE 3 – GRADE 10

MATTER

Grade 3	Grade 4	Grade 5	Grade 6				
	PROPERTIES OF MATTER						
When learners observe different objects and materials, they become aware of their different characteristics such as shape, weight, definiteness of volume and ease of flow. Using characteristics, objects and materials can be grouped into solids, liquids or gases.	Aside from being grouped into solids, liquids, or gases, materials may also be grouped according to their ability to absorb water, ability to float or sink, and whether they decay or not	After learning how to read and interpret product labels, learners can critically decide whether these materials are harmful or not. They can also describe ways in which they can use their knowledge of solids and liquids in making useful materials and products.	In Grade 4, the learners have observed the changes when mixing a solid in a liquid or a liquid in another liquid. From these investigations, learners can now describe the appearance of mixtures as uniform or non-uniform and classify them as homogeneous or heterogeneous mixtures.				
	CHANGES	THAT MATTER UNDERGO					
Using the characteristics observed among solids, liquids, and gases, learners investigate ways in which solid turns into liquid, solid into gas, liquid into gas, and liquid into solid, as affected by temperature.	Changes in some characteristics of solid materials can be observed when these are bent, hammered, pressed, and cut. After investigating the changes in some observable characteristics of materials due to temperature in Grade 3, learners can now inquire about changes observed when a solid is mixed with a liquid or when a liquid is mixed with another liquid. Learners learn that some changes in the characteristics of a product such as food or medicine may affect its quality. One way of finding out is by reading and interpreting product labels. This information helps them decide when these products become harmful.	In Grade 4, learners investigated changes in materials that take place at certain conditions, such as applying force, mixing materials, and changing the temperature. In Grade 5, they investigate changes that take place under the following conditions: presence or lack of oxygen (in air), and applying heat. They learn that some of these conditions can result in a new product. Knowing these conditions enable them to apply the "5R method" (recycling, reducing, reusing, recovering and repairing) at home and in school.	Based on the characteristics of the components of a heterogeneous mixture, learners investigate ways of separating these components from the mixture. They will infer that the characteristics of each of the components remain the same even when the component is part of the mixture.				

Grade 7	Grade 8	Grade 9	Grade 10
	PROPERTIES AN	D STRUCTURE OF MATTER	
In Grade 6, learners learned how to distinguish homogenous from heterogeneous mixtures. In Grade 7, learners investigate properties of solutions that are homogeneous mixtures. They learn how to express concentrations of solutions qualitatively and quantitatively. They distinguish mixtures from substances based on a set of properties. Learners begin to do guided and semi- guided investigations, making sure that the experiment they are conducting is a fair test.	Using models, learners learn that matter is made up of particles, the smallest of which is the atom. These particles are too small to be seen through a microscope. The properties of materials that they have observed in earlier grades can now be explained by the type of particles involved and the attraction between these particles.	Using their understanding of atomic structure learned in Grade 8, learners describe how atoms can form units called molecules. They also learn about ions. Further, they explain how atoms form bonds (ionic and covalent) with other atoms by the transfer or sharing of electrons. They also learn that the forces holding metals together are caused by the attraction between flowing electrons and the positively charged metal ions. Learners explain how covalent bonding in carbon forms a wide variety of carbon compounds. Recognizing that matter consists of an extremely large number of very small particles, counting these particles is not practical. So, learners are introduced to the unit—mole.	Learners investigate how gases behave in different conditions based on their knowledge of the motion of and distances between gas particles. Learners then confirm whether their explanations are consistent with the Kinetic Molecular Theory. They also learn the relationships between volume, temperature, and pressure using established gas laws. In Grade 9, learners learned that the bonding characteristics of carbon result in the formation of large variety of compounds. In Grade 10, they learn more about these compounds that include biomolecules such as carbohydrates, lipids, proteins, and nucleic acids. Further, they will recognize that the structure of these compounds comprises repeating units that are made up of a limited number of elements such as carbon, hydrogen, oxygen, and nitrogen.
	CHANGES TH	AT MATTER UNDERGO	1
Learners recognize that materials combine in various ways and through different processes, contributing to the wide variety of materials. Given this diversity, they recognize the importance of a classification system. They become familiar with elements and compounds, metals and non-metals, and acids and bases. Further, learners demonstrate that homogeneous mixtures can be separated using various techniques.	Learners learn that particles are always in motion. They can now explain that the changes from solid to liquid, solid to gas, liquid to solid, and liquid to gas, involve changes in the motion of and relative distances between the particles, as well as the attraction between them. They also recognize that the same particles are involved when these changes occur. In effect, no new substances are formed.	Learners explain how new compounds are formed in terms of the rearrangement of particles. They also recognize that a wide variety of useful compounds may arise from such rearrangements.	In Grade 9, learners described how particles rearrange to form new substances. In Grade 10, they learn that the rearrangement of particles happen when substances undergo chemical reaction. They further explain that when this rearrangement happens, the total number of atoms and total mass of newly formed substances remain the same. This is the Law of Conservation of Mass. Applying this law, learners learn to balance chemical equations and solve simple mole-mole, mole- mass, and mass-mass problems.

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LIVING THINGS AND THEIR ENVIRONMENT

Grada 2	Grada 4	Grada E	Grada 6		
Grade 5	Graue 4	Grade 5	Grade o		
	PARTS AND FUNC	TION OF ANIMALS AND PLANTS			
In Grade 3, learners observe and describe the different parts of living things focusing on the sense organs of humans and the more familiar external parts of animals and plants. They also explore and describe characteristics of living things that distinguish them from non-living things.	In Grade 4, the learners are introduced to the major organs of the human body. They also learn about some parts that help plants and animals survive in places where they live.	After learning in Grade 4 how the major organs of the human body work together, the learners now focus on the organs of the reproductive systems of humans, animals, and plants.	In Grade 6, learners describe the interactions among parts of the major organs of the human body. They also learn how vertebrates and invertebrates differ and how non-flowering plants reproduce,		
	HEREDITY:IN	HERITANCE AND VARIATION			
Learners learn that living things reproduce and certain traits are passed on to their offspring/s.	Learners learn that humans, animals, and plants go through life cycles. Some inherited traits may be affected by the environment at certain stages in their life cycles.	Learners learn how flowering plants and some non-flowering plants reproduce. They are also introduced to the sexual and asexual modes of reproduction.	Learners learn how non-flowering plants (spore-bearing and cone-bearing plants, ferns, and mosses) reproduce.		
	BIODIVE	RSITY AND EVOLUTION			
Different kinds of living things are found in different places.	Learners investigate that animals and plants live in specific habitats.	Learners learn that reproductive structures serve as one of the bases for classifying living things.	They learn that plants and animals share common characteristics which serve as bases for their classification.		
ECOSYSTEMS					
Learners learn that living things depend on their environment for food, air, and water to survive.	Learners learn that there are beneficial and harmful interactions that occur among living things and their environment as they obtain their basic needs.	Learners are introduced to the interactions among components of larger habitats such as estuaries and intertidal zones, as well as the conditions that enable certain organisms to live.	Learners are introduced to the interactions among components of habitats such as tropical rainforests, coral reefs, and mangrove swamps.		

Grade 7	Grade 8	Grade 9	Grade 10		
PARTS AND FUNCTION: ANIMAL AND PLANTS					
In Grade 7, learners are introduced to the levels of organization in the human body and other organisms. They learn that organisms consist of cells, most of which are grouped into organ systems that perform specialized functions.	In Grade 8, learners gain knowledge of how the body breaks down food into forms that can be absorbed through the digestive system and transported to cells. Learners learn that gases are exchanged through the respiratory system. This provides the oxygen needed by cells to release the energy stored in food. They also learn that dissolved wastes are removed through the urinary system while solid wastes are eliminated through the excretory system.	Learners study the coordinated functions of the digestive, respiratory, and circulatory systems. They also learn that nutrients enter the bloodstream and combine with oxygen taken in through the respiratory system. Together, they are transported to the cells where oxygen is used to release the stored energy.	Learners learn that organisms have feedback mechanisms that are coordinated by the nervous and endocrine systems. These mechanisms help the organisms maintain homeostasis to reproduce and survive.		
	HEREDITY:INHERITAN	ICE AND VARIATION			
After learning how flowering and non flowering plants reproduce, Grade 7 learners are taught that asexual reproduction results in genetically identical offspring whereas sexual reproduction gives rise to variation.	Learners study the process of cell division by mitosis and meiosis. They understand that meiosis is an early step in sexual reproduction that leads to variation.	Learners study the structure of genes and chromosomes, and the functions they perform in the transmission of traits from parents to offspring.	Learners are introduced to the structure of the DNA molecule and its function. They also learn that changes that take place in sex cells are inherited while changes in body cells are not passed on.		
	BIODIVERSITY A	ND EVOLUTION			
Learners learn that the cells in similar tissues and organs in other animals are similar to those in human beings but differ somewhat from cells found in plants.	Learners learn that <i>species</i> refers to a group of organisms that can mate with one another to produce fertile offspring. They learn that biodiversity is the collective variety of species living in an ecosystem. This serves as an introduction to the topic on hierarchical taxonomic system.	Learners learn that most species that have once existed are now extinct. Species become extinct when they fail to adapt to changes in the environment.	Learners revisit the mechanisms involved in the inheritance of traits and the changes that result from these mechanisms. Learners explain how natural selection has produced a succession of diverse new species. Variation increases the chance of living things to survive in a changing environment.		

Grade 7	Grade 8	Grade 9	Grade 10
	ECOSYS	TEMS	
Learners learn that interactions occur	Learners learn how energy is	Learners learn how plants capture	Learners investigate the impact of
among the different levels of organization in	transformed and how materials are	energy from the Sun and store energy	human activities and other organisms on
ecosystems. Organisms of the same kind	cycled in ecosystems.	in sugar molecules (photosynthesis).	ecosystems.
interact with each other to form		This stored energy is used by cells	
populations; populations interact with other		during cellular respiration. These two	They learn how biodiversity influences
populations to form communities.		processes are related to each other.	the stability of ecosystems.

FORCE, MOTION AND ENERGY

Grade 3	Grade 4	Grade 5	Grade 6				
FORCE AND MOTION							
Learners observe and explore and investigate how things around them move and can be moved. They also identify things in their environment that can cause changes in the movement of objects.	Learners now learn that if force is applied on an object, its motion, size, or shape can be changed. They will further understand that these changes depend on the amount of force applied on it (qualitative). They also learn that magnets can exert force on some objects and may cause changes in their movements.	This time, learners begin to accurately measure the amount of change in the movement of an object in terms of its distance travelled and time of travel using appropriate tools.	Aside from the identified causes of motion in Grade 3, such as people, animals, wind, and water, learners also learn about gravity and friction as other causes or factors that affect the movement of objects.				
	ENE	RGY					
Learners observe and identify different sources of light, heat, sound, and electricity in their environment and their uses in everyday life.	Learners learn that light, heat, and sound travel from the source. They perform simple activities that demonstrate how they travel using various objects. <i>Note: Electricity is not included in</i> <i>Grade 4 because the concept of 'flow of</i> <i>charges' is difficult to understand at</i> <i>this grade level.</i>	This time, learners explore how different objects interact with light, heat, sound, and electricity (e.g., identifying poor and good conductors of electricity using simple circuits). They learn about the relationship between electricity and magnetism by constructing an electromagnet. They also learn about the effects of light, heat, sound, and electricity on people.	At this grade level, learners are introduced to the concept of energy. They learn that energy exists in different forms, such as light, heat, sound and electricity, and it can be transformed from one form to another. They demonstrate how energy is transferred using simple machines.				

			-				
Grade 7	Grade 8	Grade 9	Grade 10				
	FORCE AND MOTION						
From a simple understanding of motion, learners study more scientific ways of describing (in terms of distance, speed, and acceleration) and representing (using motion diagrams, charts, and graphs) the motion of objects in one dimension.	This time, learners study the concept of force and its relationship to motion. They use Newton's Laws of Motion to explain why objects move (or do not move) the way they do (as described in Grade 7). They also realize that if force is applied on a body, work can be done and may cause a change in the energy of the body.	To deepen their understanding of motion, learners use the Law of Conservation of Momentum to further explain the motion of objects. From motion in one dimension in the previous grades, they learn at this level about motion in two dimensions using projectile motion as an example.	From learning the basics of forces in Grade 8, learners extend their understanding of forces by describing how balanced and unbalanced forces, either by solids or liquids, affect the movement, balance, and stability of objects.				
	ENE	RGY					
This time learners recognize that different forms of energy travel in different ways—light and sound travel through waves, heat travels through moving or vibrating particles, and electrical energy travels through moving charges. In Grade 5, they learned about the different modes of heat transfer. This time, they explain these modes in terms of the movement of particles.	Learners realize that transferred energy may cause changes in the properties of the object. They relate the observable changes in temperature, amount of current, and speed of sound to the changes in energy of the particles.	Learners explain how conservation of mechanical energy is applied in some structures, such as roller coasters, and in natural environments like waterfalls. They further describe the transformation of energy that takes place in hydroelectric power plants. Learners also learn about the relationship between heat and work, and apply this concept to explain how geothermal power plants operate. After they have learned how electricity is generated in power plants, learners further develop their understanding of transmission of electricity from power stations to homes.	Learners acquire more knowledge about the properties of light as applied in optical instruments. Learners also use the concept of moving charges and magnetic fields in explaining the principle behind generators and motors.				

EARTH AND SPACE

Grade 3	Grade 4	Grade 5	Grade 6			
	GEOLOGY					
Learners will describe what makes up their environment, beginning with the landforms and bodies of water found in their community.	After familiarizing themselves with the general landscape, learners will investigate two components of the physical environment in more detail: soil and water. They will classify soils in their community using simple criteria. They will identify the different sources of water in their community. They will infer the importance of water in daily activities and describe ways of using water wisely.	In this grade level, learners will learn that our surroundings do not stay the same forever. For example, rocks undergo weathering and soil is carried away by erosion. Learners will infer that the surface of the Earth changes with the passage of time.	Learners will learn that aside from weathering and erosion, there are other processes that may alter the surface of the Earth: earthquakes and volcanic eruptions. Only the effects of earthquakes and volcanic eruptions are taken up in this grade level, not their causes (which will be tackled in Grades 8 and 9). Learners will also gather and report data on earthquakes and volcanic eruptions in their community or region.			
		METEOROLOGY				
Learners will describe the different types of local weather,	After making simple descriptions about the weather in the previous grade, learners will now measure the components of weather using simple instruments. They will also identify trends in a simple weather chart.	Learners will learn that the weather does not stay the same the whole year round. Weather disturbances such as typhoons may occur. Learners will describe the effects of typhoons on the community and the changes in the weather before, during, and after a typhoon.	After learning how to measure the different components of weather in Grades 4 and 5, learners will now collect weather data within the span of the school year. Learners will interpret the data and identify the weather patterns in their community.			
		ASTRONOMY				
Learners will describe the natural objects that they see in the sky.	After describing the natural objects that are seen in the sky, learners will now focus on the main source of heat and light on Earth: the Sun, its role in plant growth and development, and its effect on the activities of humans and other animals.	After learning about the Sun, learners will now familiarize themselves with the Moon and the stars. They will describe the changes in the appearance of the Moon and discover that the changes are cyclical, and that the cycle is related to the length of a month. Learners will identify star patterns that can be seen during certain times of the year.	In Grade 6, learners will turn their attention to Earth as another natural object in space (in addition to the Sun, Moon, and stars). Learners will learn about the motions of the Earth: rotation and revolution. Learners will also compare the different members that make up the Solar System and construct models to help them visualize their relative sizes and distances.			

Grade 7	Grade 8	Grade 9	Grade 10				
	GEOLOGY						
Learners will explore and locate places using a coordinate system. They will discover that our country's location near the equator and along the Ring of Fire influences elements of up Philippine environment (e.g., natural resources and climate).	As a result of being located along the Ring of Fire, the Philippines is prone to earthquakes. Using models, learners will explain how quakes are generated by faults. They will try to identify faults in the community and differentiate active faults from inactive ones.	Being located along the Ring of Fire, the Philippines is home to many volcanoes. Using models, learners will explain what happens when volcanoes erupt. They will describe the different types of volcanoes and differentiate active volcanoes from inactive ones. They will also explain how energy from volcanoes may be tapped for human use.	Using maps, learners will discover that volcanoes, earthquake epicenters, and mountain ranges are not randomly scattered in different places but are located in the same areas. This will lead to an appreciation of plate tectonics—a theory that binds many geologic processes such as volcanism and earthquakes.				
	METEOR	ROLOGY					
Learners will explain the occurrence of atmospheric phenomena (breezes, monsoons, and ITCZ) that are commonly experienced in the country as a result of the Philippines' location with respect to the equator, and surrounding bodies of water and landmasses.	Being located beside the Pacific Ocean, the Philippines is prone to typhoons. In Grade 5, the effects of typhoons were tackled. Here, learners will explain how typhoons develop, how typhoons are affected by landforms and bodies of water, and why typhoons follow certain paths as they move within the Philippine Area of Responsibility.	In this grade level, learners will distinguish between weather and climate. They will explain how different factors affect the climate of an area. They will also be introduced to climatic phenomena that occur over a wide area (e.g., El Niño and global warming).	Note: The theory of plate tectonics is the sole topic in Earth and Space in Grade 10. This is because the theory binds many of the topics in previous grade levels, and more time is needed to explore connections and deepen learners' understanding.				
	ASTRO	NOMY					
Learners will explain the occurrence of the seasons and eclipses as a result of the motions of the Earth and the Moon. Using models, learners will explain that because the Earth revolves around the Sun, the seasons change, and because the Moon revolves around the Earth, eclipses sometimes occur.	Learners will complete their survey of the Solar System by describing the characteristics of asteroids, comets, and other members of the Solar System.	Learners will now leave the Solar System and learn about the stars beyond. They will infer the characteristics of stars based on the characteristics of the Sun. Using models, learners will show that constellations move in the course of a night because of Earth's rotation, while different constellations are observed in the course of a year because of the Earth's revolution.					

GRADE 7

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	SCIENCE EQUIPMENT
Grade 7 – Matter FIRST QUARTER/FIRST GRADING PERIOD						
Doing Scientific Investigations 1. Ways of acquiring knowledge and solving problems	<i>The learners</i> <i>demonstrate an</i> <i>understanding of</i> : scientific ways of acquiring knowledge and solving problems	<i>The learners shall be able to:</i> perform in groups in guided investigations involving community-based problems using locally available materials	The learners should be able to 1. describe the components of a scientific investigation;	S7MT-Ia-1	 OHSP Integrated Science I. Quarter 1. Module 1. BEAM I. Module 2. Chemistry III Textbook. Mapa, Amelia P., Ph.D., et al. 2001. pp. 7-9. * Science and Technology III: Chemistry Textbook. NISMED. 2012. pp. 3-5. Science and Technology III. NISMED. 1997. pp-14-16. 	
 Diversity of Materials in the Environment Solutions 	<i>The learners demonstrate an understanding of</i> : some important properties of solutions	<i>The learners</i> <i>demonstrate an</i> <i>understanding of</i> : prepare different concentrations of mixtures according to uses and availability of materials	 investigate properties of unsaturated or saturated solutions; 	S7MT-Ic-2	 EASE Science II. Module 7. APEX Chemistry Solutions. Unit 2. Chapter 1. Lesson 1. BEAM III. Unit 3. 8 Demonstrate Understanding of 	Osmosis apparatus

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CONTENT	CONTENT	PERFORMANCE	LEARNING COMPETENCY	CODE	LEARNING	SCIENCE
	STANDARDS	STANDARDS			MATERIALS	EQUIPMENT
	- <i>'</i>	-			Solutions. The	
2. Diversity of Materials in the	The learners	The learners	2. investigate properties of	S7MT-1c-2	Marvels of	
Environment	demonstrate an	demonstrate an	unsaturated or saturated solutions;		Solutions.	
	understanding of.	understanding of.			Septermber	
2.1 Solutions		1:00			2009.	
	some important	prepare different			4. Chemistry III	
	properties of	concentrations of			Amolia D. Dh.D.	
	SOLUCIONS	mixtures according to			AITIEIId P., PII.D.,	
		uses and availability of			et al. 2001. pp.	
		materials			5 Science and	
					Chemistry	
					Textbook	
					NISMED, 2012.	
					pp. 114-119.	
					6. Science and	
					Technology III.	
					NISMED. 1997.	
					pp. 129-133.	
					1. EASE Science	
			3. express concentrations of	S7MT-Id-3	II. Module 7.	1. Volumetric
			solutions quantitatively by		2. APEX Chemistry	flask, 250
			preparing different		Solutions. Unit	mL
			concentrations of mixtures		2. Chapter 1.	2. Graduated
			according to uses and		Lessons 6-7.	cylinder, 100
			availability of materials;		3. BEAM III. Unit	mL D T : L L
					3.8	3. Triple beam
					Demonstrate	Dalance
					Understanding	4. Dedker 5. Erlenmover
					or Solutions.	J. Ellerilleyei
						IIDDN
					Solutions.	
					2000	
					4 Chemistry III	
					Textbook.	

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			DUCATION CONNICOLON		•	
CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	SCIENCE EQUIPMENT
2. Diversity of Materials in the Environment2.1 Solutions	<i>The learners demonstrate an understanding of:</i> some important properties of solutions	<i>The learners</i> <i>demonstrate an</i> <i>understanding of</i> : prepare different concentrations of mixtures according to uses and availability of materials	 express concentrations of solutions quantitatively by preparing different concentrations of mixtures according to uses and availability of materials; 	S7MT-Id-3	 Mapa, Amelia P., Ph.D., et al. 2001. pp. 283- 290. * 5. Science and Technology III: Chemistry Textbook. NISMED. 2012. pp. 132-136. 6. Science and Technology III. NISMED. 1997. pp. 142-153. 	
2.2 Substances and Mixtures	The learners demonstrate an understanding of: the properties of substances that distinguish them from mixtures	The learners demonstrate an understanding of: investigate the properties of mixtures of varying concentrations using available materials in the community for specific purposes	 distinguish mixtures from substances based on a set of properties; 	S7MT-Ie-f-	 EASE II. Module 3. Lesson 2. BEAM III. Unit 2. 5 Demonstrate Skill in Identifying Chemical System. Pure Substance and Mixture. August 2009. EASE I. Module 5. Lesson 3. Chemistry III Textbook. Mapa, Amelia P., Ph.D., et al. 2001. pp. 38- 42. Science and 	Penlight Thermometer, alcohol

K to 12 PASTC EDUCATION CUDDICULUM

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	SCIENCE EQUIPMENT
					 Technology III: Chemistry Textbook. NISMED. 2012. pp. 34-38. 6. Science and Technology III. NISMED. 1997. pp. 30-34. 	
2.3 Elements and Compounds	The learners demonstrate an understanding of: classifying substances as elements or compounds	The learners demonstrate an understanding of: make a chart, poster, or multimedia presentation of common elements showing their names, symbols, and uses	5. recognize that substances are classified into elements and compounds;	S7MT-Ig-h-5	 EASE II. Module 3. Lesson 3. BEAM III. Unit 2. 6 Demonstrate Understanding of Elements. Elements and Compounds. August 2009. EASE I. Module 5. Lesson 3. Chemistry III Textbook. Mapa, Amelia P., Ph.D., et al. 2001. pp. 45- 49. Science and Technology III: Chemistry Textbook. NISMED. 2012. pp. 52-56. Science and 	Electrolysis apparatus Periodic table of elements

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	SCIENCE EQUIPMENT
					Technology III. NISMED. 1997. pp. 42-52.	
2.4 Acids and Bases	The learners demonstrate an understanding of: the common properties of acidic and basic mixtures	The learners demonstrate an understanding of: properly interpret product labels of acidic and basic mixture, and practice safe ways of handling acids and bases using protective clothing and safety gear	 investigate properties of acidic and basic mixtures using natural indicators; and 	S7MT-Ii-6	 BEAM III. Module 3. Lesson 3. NSTIC Science Manual. Biology Science Manual 413. 1.d Acids and Bases. NSTIC Science Manual. Chemistry Science Manual. pp. 34-39. Chemistry III Textbook. Mapa, Amelia P., Ph.D., et al. 2001. pp. 51-52. * Science and Technology III: Chemistry Textbook. NISMED. 2012. pp. 62-65. 	 beaker, 250 mL Erlenmeyer flask medicine droppers pH meter pH paper test tubes vials volumetric flask, 250 mL
2.5 Metals and Non-metals	<i>The learners</i> <i>demonstrate an</i> <i>understanding of</i> : properties of metals and nonmetals		 describe some properties of metals and non-metals such as luster, malleability, ductility, and conductivity. 	S7MT-Ij-7	 APEX. Phases of Matter. Unit 1. Chapter 2. EASE II. Module II. Lesson 3. EASE I. Module 5. pp. 16-18 	Electrical conductivity apparatus Improvised thermal conductivity apparatus

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	SCIENCE EQUIPMENT
Grade 7 – Living Things and Thei SECOND QUARTER/SECOND GRA	eir Environment				4. Science and Technology III. NISMED. 1997. pp. 48-51.	
I. Parts and Functions 7. 1. Microscopy 44 fu fu mm 64	The learners demonstrate an understanding of: the parts and functions of the compound microscope	The learners should be able to: employ appropriate techniques using the compound microscope to gather data about very small objects	 <i>The learners should be able to</i> identify parts of the microscope and their functions; focus specimens using the compound microscope; 	S7LT-IIa-1	 BEAM II. 1 Nature of Biology. Tools in Biology. April 2009. pp. 21- 37. NSTIC Science Manual. Biology Science Manual 413M. 27b Microscope. NSTIC Science Manual. Biology Science Manual 413M. 4 The Compound Microscope. Science and Technology II: Biology Textbook. NISMED. 2012. pp. 12-15. Science and Technology II: Biology Textbook. NISMED. 2012. NISMED. 2012. NISMED. 2012. NISMED. 2004. pp. 12-15. 	Compound microscope

			-00	CATION CORRECTION			
CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS		LEARNING COMPETENCY	CODE	LEARNING MATERIALS	SCIENCE EQUIPMENT
2. Levels of Biological Organization	<i>The learners</i> <i>demonstrate an</i> <i>understanding of</i> : the different levels of biological organization	<i>The learners should be able to:</i> employ appropriate techniques using the compound microscope to gather	3.	describe the different levels of biological organization from cell to biosphere;	S7LT-IIc-3	EASE Biology. Module 6.	
3. Animal and Plant Cells	<i>The learners demonstrate an understanding of</i> : the difference between animal and plant cells	data about very small objects	4.	differentiate plant and animal cells according to presence or absence of certain organelles;	S7LT-IId-4	 Science and Technology II: Biology Textbook. NISMED. 2012. pp. 22-28. Science and Technology II: Biology Textbook. NISMED. 2004. pp. 22-28. 	
			5.	explain why the cell is considered the basic structural and functional unit of all organisms;	S7LT-IIe-5	 APEX. Unit 2. The Unit Cycle of Life. BEAM II. Module 2. The Basic Units of Life. EASE Biology. Module 2. Science and Technology II: Biology Textbook. NISMED. 2012. pp. 21-22. 	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS		LEARNING COMPETENCY	CODE		LEARNING MATERIALS	SCIENCE EQUIPMENT
						5.	Science and Technology II: Biology Textbook. NISMED. 2004. pp. 21-22.	
4. Fungi, Protists, and Bacteria	<i>The learners</i> <i>demonstrate an</i> <i>understanding of</i> : organisms that can only be seen through the microscope, many of which consist of only one cell	<i>The learners should be able to:</i> employ appropriate techniques using the compound microscope to gather data about very small objects	6.	identify beneficial and harmful microorganisms;	S7LT-IIf-6	1.	Science and Technology II: Biology Textbook. NISMED. 2012. pp. 247-268. Science and Technology II: Biology Textbook. NISMED. 2004. pp. 247-268.	
 II. Heredity: Inheritance and Variation 1. Asexual reproduction 2. Sexual reproduction 	The learners demonstrate an understanding of: reproduction being both asexual or sexual		7.	 differentiate asexual from sexual reproduction in terms of: 7. 1 number of individuals involved; 7. 2 similarities of offspring to parents; 	S7LT-IIg-7	 1. 2. 3. 4. 5. 	APEX Biology. Unit 5. Life Reproduction. BEAM II. Unit 1. Different Life Process. Process of Life. April 2009. BEAM II. Unit 5. Reproduction. Cell Growth and Reproduction. April 2009. EASE Biology. Module 12. Lesson 3. Science and	

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CONTENT	CONTENT	PERFORMANCE		LEARNING COMPETENCY	CODE	LEARNING MATERIALS	SCIENCE FOUIPMENT
 II. Heredity: Inheritance and Variation 1. Asexual reproduction 2. Sexual reproduction 	<i>The learners demonstrate an understanding of:</i> reproduction being both asexual or sexual	The learners should be able to: employ appropriate techniques using the compound microscope to gather data about very small objects	7.	 differentiate asexual from sexual reproduction in terms of: 7. 1 number of individuals involved; 7. 2 similarities of offspring to parents; 	S7LT-IIg-7	Technology II: Biology Textbook. NISMED. 2012. pp. 139-142. 6. Science and Technology II: Biology Textbook. NISMED. 2004. pp. 139-142.	
			8.	describe the process of fertilization;	S7LT-IIg-8	 MISOSA 5. Module 3. BEAM 5. Unit 1. 1 The Human Reproductive System. Distance Learning Modules. DLP2. BEAM 4. Unit 4. Distance Learning Modules. DLP31. MISOSA 4. Module 6. APEX. Biology Unit 5. Science for Daily Use 4. Lozada, Buena A., et al. 2011. pp. 76-78. * Science for Daily Use 5. Tan, Conchita T. 2012. pp. 6-10. * Science and 	

K to 12 PASTC EDUCATION CUDDICULUM

		K to 12 BASIC I	EDU	CATION CURRICULUM			
CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS		LEARNING COMPETENCY	CODE	LEARNING MATERIALS	SCIENCE EQUIPMENT
 II. Heredity: Inheritance and Variation 1. Asexual reproduction 2. Sexual reproduction 	<i>The learners demonstrate an understanding of</i> : reproduction being both asexual or sexual	<i>The learners should be able to:</i> employ appropriate techniques using the compound microscope to gather data about very small objects	8.	describe the process of fertilization;	S7LT-IIg-8	Technology II: Biology Textbook. NISMED. 2012. pp. 153-157. 9. Science and Technology II: Biology Textbook. NISMED. 2004. pp. 153-157.	
 I. Ecosystems 1. Components of an ecosystem 2. Ecological relationships 2.1 Symbiotic relationships 2.2 Non symbiotic relationships 3. Transfer of energy through trophic levels 	<i>The learners demonstrate an understanding of:</i> organisms interacting with each other and with their environment to survive	The learners should be able to: conduct a collaborative action to preserve the ecosystem in the locality	9.	differentiate biotic from abiotic components of an ecosystem;	S7LT-IIh-9	 BEAM I. Unit 5. 1 Living Things and Their Interactions. June 2009. EASE I. Module 9. MISOSA 6. Components of an Ecosystem. Science and Technology I: Integrated Science Textbook for First Year. Villamil, Aurora M., Ed.D. 1998. p. 222. * 	
			10	. describe the different ecological relationships found in an ecosystem;	S7LT-IIh- 10	 MISOSA 6. Interrelationship among Organisms. BEAM I. Unit 5. 1 Living Things and 	

		K to 12 BASIC E	EDUCATION CURRICULUM			
CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	SCIENCE EQUIPMENT
 II. Ecosystems 1. Components of an ecosystem 2. Ecological relationships 2.1 Symbiotic relationships 2.2 Non symbiotic relationships 3. Transfer of energy through trophic levels 	<i>The learners</i> <i>demonstrate an</i> <i>understanding of</i> : organisms interacting with each other and with their environment to survive	The learners should be able to: conduct a collaborative action to preserve the ecosystem in the locality	10. describe the different ecological relationships found in an ecosystem;	S7LT-IIh- 10	 their Interactions. June 2009. 3. EASE Biology. Module 19. 4. EASE I. Module 10. 5. Science and Technology I: Integrated Science Textbook for First Year. Villamil, Aurora M., Ed.D. 1998. pp. 223-226. * 	
			11. predict the effect of changes in one population on other populations in the ecosystem; and	S7LT-IIi-11	MISOSA 6. Module 11.	
			12. predict the effect of changes in abiotic factors on the ecosystem.	S7LT-IIj-12	 MISOSA 6. Components of an Ecosystem. EASE I. Module 9. 	
Grade 7 – Force, Motion and, THIRD QUARTER/THIRD GRA	Energy DING PERIOD					
I. Motion in One Dimension 1. Descriptors of Motion 1.1 Distance or Displacement 1.2 Speed or Velocity 1.3 Acceleration	<i>The learners demonstrate an understanding of:</i> motion in one dimension	<i>The learners shall be able to:</i> conduct a forum on mitigation and disaster risk reduction	 <i>The learners should be able to</i> 1. describe the motion of an object in terms of distance or displacement, speed or velocity, and acceleration; 	S7FE-IIIa- 1	1. NSTIC Science Manual. Integrated Science Manual. 413 M. pp. 2-13. (Module 8). 2. MISOSA 6. Module 24.	NSTIC SciKit Basic and Mechanics: Stand Base; Stand Support; Stand Support; Stand Rods; Multi-clamps;

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	SCIENCE EOUIPMENT
2. Motion Detectors					3. EASE Physics. Module 10.	Stopwatch (digital); Cart-
 I. Motion in One Dimension 1. Descriptors of Motion 1.1 Distance or Displacement 1.2 Speed or Velocity 1.4 Acceleration 2. Motion Detectors 	<i>The learners demonstrate an understanding of:</i> motion in one dimension	The learners shall be able to: conduct a forum on mitigation and disaster risk reduction	 The learners should be able to 1. describe the motion of an object in terms of distance or displacement, speed or velocity, and acceleration; 	S7FE-IIIa- 1	 4. Science and Technology I: Integrated Science Textbook for First Year. Villamil, Aurora M., Ed.D. 1998. pp. 73-74. * 5. Science and Technology IV: Physics Textbook for Fourth Year. Rabago, Lilia M., Ph.D., et al. 2001. pp. 50-61. * 	Rail System; Motorized Cart; Free-Fall Apparatus; Meter Stick; Magnetic Compass; Ticker Timer Set
			2. differentiate quantities in terms of magnitude and direction;	S7FE-IIIa- 2	Science and Technology IV: Pysics Textbook. NISMED. 2012. p. 258.	
			 create and interpret visual representation of the motion of objects such as tape charts and motion graphs; 	S7FE-IIIb- 3	Science and Technology IV: Physics Textbook. NISMED. 2012. p. 285.	
II. Waves 1. Types of Waves 2. Characteristics of Waves 2.1 Amplitude 2.2 Wavelength	<i>The learners</i> <i>demonstrate an</i> <i>understanding of:</i> waves as a carriers of energy		4. infer that waves carry energy;	S7LT-IIIc- 4	1.OHSP. Module 15. 2.EASE Physics. Module 15. 3.Science and Technology IV: Physics Textbook for Fourth Year.	

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		K to 12 BASIC	EDUCATION CURRICULUM			
CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	SCIENCE EQUIPMENT
3. Wave Velocity II. Waves	The learners	The learners shall be			Rabago, Lilia M., Ph.D., et al. 2001. pp. 194-197. *	
 Types of Waves Characteristics of Waves Amplitude Wavelength Wave Velocity 	<i>demonstrate an understanding of:</i> waves as a carriers of energy	able to: conduct a forum on mitigation and disaster risk reduction	5. differentiate transverse from longitudinal waves, and mechanical from electromagnetic waves;	S7LT-IIIc- 5	 1.OHSP. Module 15. 2.EASE Physics. Module 15. 3.Science and Tecnology IV: Physics Textbook for Fourth Year. Rabago, Lilia M., Ph.D., et al. 2001. pp. 202-203. 	
			6. relate the characteristics of waves;	S7LT-IIId- 6	 OHSP. Module 15. EASE Physics. Module 15. Science and Technology IV: Physics Textbook for Fourth Year. Rabago, Lilia M., Ph.D., et al. 2001. pp. 198-200. * 	
III. Sound 1. Characteristics of sound 1.1.Pitch 1.2 Loudness 1.3 Quality	<i>The learners demonstrate an understanding of:</i> the characteristics of sound		7.describe the characteristics of sound using the concepts of wavelength, velocity, and amplitude;	S7LT-IIId- 7	 EASE Physics. Module 16. OHSP. Module 16. Science and Technology IV: Physics Textbook. NISMED. 2012. pp. 371-372 	

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CONTENT	CONTENT PERFORMANCE STANDARDS STANDARDS		LEARNING COMPETENCY	CODE	LEARNING MATERIALS	SCIENCE EQUIPMENT
III. Sound 1. Characteristics of sound 1.1.Pitch 1.2 Loudness 1.3 Quality	<i>The learners demonstrate an understanding of:</i> the characteristics of sound	<i>The learners shall be able to:</i> conduct a forum on mitigation and disaster risk reduction	8.explain sound production in the human voice box, and how pitch, loudness, and quality of sound vary from one person to another;	S7LT-IIIe- 8	 EASE Physics. Module 16. OHSP. Module 16. Science and Technology IV: Physics Textbook. NISMED. 2012. pp. 372-375. 	
			9. describe how organisms produce, transmit, and receive sound of various frequencies (infrasonic, audible, and ultrasonic sound);	S7LT-IIIe- 9	 EASE Physics. Module 16. OHSP. Module 16. Science and Technology IV: Physics Textbook for Fourth Year. Rabago, Lilia M., Ph.D., et al. 2001. pp. 221- 226. * 	
IV. Light 1. Characteristics of Light 1.1 Intensity or Brightness 1.2 Color	<i>The learners demonstrate an understanding of:</i> the characteristics of light	<i>The learners shall be able to:</i> suggest proper lighting in various activities	10. relate characteristics of light such as color and intensity to frequency and wavelength;	S7LT-IIIf- 10	 EASE Physics. Module 3. Science and Technology IV: Physics Textbook for Fourth Year. Rabago, Lilia M., Ph.D., et al. 2001. P. 246. * 	
			11. infer that light travels in a straight line;	S7LT-IIIg- 11	 1. EASE Physics. Module 3. 2. Science and Technology IV: 	

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K to) 12	BASIC	EDUCATION	CURRICULUM
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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	SCIENCE EQUIPMENT
IV. Light 1. Characteristics of Light 1.1 Intensity or Brightness 1.2 Color	<i>The learners</i> <i>demonstrate an</i> <i>understanding of:</i> the characteristics of light	<i>The learners shall be able to:</i> suggest proper lighting in various activities			Physics Textbook for Fourth Year. Rabago, Lilia M., Ph.D., et al. 2001. P. 236.*	
V. Heat 1. Heat Transfer 1.1 Conduction 1.2 Convection 1.3 Radiation	<i>The learners demonstrate an understanding of:</i> how heat is transferred		12. infer the conditions necessary for heat transfer to occur;	S7LT-IIIh- i-12	 MISOSA 4. Methods of Heat Transfer. Science and Technology I: Integrated Science Textbook for First Year. Villamil, Aurora M., Ed.D. 1998. P. 97. * Science and Technology IV: Physics Textbook for Fourth Year. Rabago, Lilia M., Ph.D., et al. 2001. P. 187. * 	Heat conduction metals (different metals)
VI. Electricity 1. Charges 2. Charging processes	<i>The learners</i> <i>demonstrate an</i> <i>understanding of:</i> charges and the different charging processes		13. describe the different types of charging processes; and	S7LT-IIIj- 13	 EASE Physics. Module 6. Lesson 2. Science and Technology IV: Physics Textbook for Fourth Year. Rabago, Lilia M., Ph.D., et al. 2001. 	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	SCIENCE EQUIPMENT
VI. Electricity 1. Charges 2. Charging processes	<i>The learners</i> <i>demonstrate an</i> <i>understanding of:</i> charges and the different charging processes	<i>The learners shall be able to:</i> suggest proper lighting in various activities	14. explain the importance of earthing or grounding.	S7LT-IIIj- 14	P. 290. * EASE Science II. Module 2. p. 19.	
Grade 7 – Earth and Space FOURTH QUARTER/FOURTH G	RADING PERIOD					
 1.The Philippine Environment 1.1 Location of the Philippines using a coordinate system 1.2. Location of the Philippines with respect to landmasses and bodies of water 1.3. Protection and conservation of natural 	<i>The learners</i> <i>demonstrate an</i> <i>understanding of</i> : the relation of geographical location of the Philippines to its environment	<i>The learners shall be able to:</i> analyze the advantage of the location of the Philippines in relation to the climate, weather, and seasons	 The learners should be able to 1. demonstrate how places on Earth may be located using a coordinate system; 2. describe the location of the Philippines with respect to the continents and oceans of the world; 	S7ES-IVa-1 S7ES-IVa-2	EASE 1. Module 14.	Ordinary globe/terestrial globe
resources			 recognize that soil, water, rocks, coal, and other fossil fuels are Earth materials that people use as resources; 	S7ES-IVb- 3	EASE Science I. Module 11.	
			4. describe ways of using Earth's resources sustainably;	S7ES-IVc-4	 EASE Science I. Module 11. Science and Technology I: Integrated 	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	SCIENCE EQUIPMENT
					Science Textbook for First Year. Villamil, Aurora M., Ed.D. 1998. Pp. 146-150. *	
 2.Interactions in the Atmosphere 2.1. Greenhouse effect and global warming 2.3. Land and sea breezes 2.4. Monsoons 2.5. Intertropical convergence zone 	<i>The learners demonstrate an understanding of:</i> the different phenomena that occur in the atmosphere	<i>The learners shall be able to:</i> analyze the advantage of the location of the Philippines in relation to the climate, weather, and	5. discuss how energy from the Sun interacts with the layers of the atmosphere;	S7ES-IVd- 5	 EASE Science I. Module 14. Science and Technology I: Integrated Science Textbook. NISMED. 2012. pp. 310-311. 	
		Seasons	6. explain how some human activities affect the atmosphere ;	S7ES-IVe-6	 EASE Science I. Module 14. Lesson 4. BEAM I. 8 Changes in the Atmosphere. Learning Guides. Point and Non- point. September 2009. Science and Technology I: Integrated Science Textbook. NISMED. 2012. pp. 301-311. 	
			7. account for the occurrence of land and sea breezes, monsoons, and intertropical convergence zone (ITCZ)	S7ES-IVf-7	Science and Technology I: Integrated Science Textbook. NISMED.	

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	SCIENCE EQUIPMENT
2.Interactions in the	The learners	The learners shall be			2012. pp. 296-299.	
Atmosphere 2.1. Greenhouse effect and global warming 2.3. Land and sea breezes 2.4. Monsoons 2.5. Intertropical convergence zone	<i>demonstrate an</i> <i>understanding of</i> : the different phenomena that occur in the atmosphere	<i>able to:</i> analyze the advantage of the location of the Philippines in relation to the climate, weather, and	8. describe the effects of certain weather systems in the Philippines;	S7ES-IVg- 8	MISOSA 5. Module 24.	
 3. Seasons in the Philippines 3.1. Relation of seasons to the position of the Sun in the sky 3.2. Causes of seasons in the Philippines 	<i>The learners</i> <i>demonstrate an</i> <i>understanding of</i> : the relationship of the seasons and the position of the Sun in the sky	seasons	 9. using models, relate: 9.1 the tilt of the Earth to the length of daytime; 9.2 the length of daytime to the amount of energy received; 9.3 the position of the Earth in its orbit to the height of the Sun in the sky; 9.4 the height of the Sun in the sky to the amount of energy received; 9.5 the latitude of an area to the amount of energy the area receives; 	S7ES-IVh- 9	 Science and Technology I: Integrated Science Textbook. NISMED. 2012. pp. 308-310. Science and Technology I: Integrated Science Textbook. NISMED. 2012. pp. 287-289. 	
			10. show what causes change in the seasons in the Philippines using models;	S7ES-IVi- 10	Science and Technology I: Integrated Science Textbook. NISMED. 2012. pp. 287-290.	
4. Eclipses 4.1. Solar Eclipse 4.2. Lunar Eclipse	<i>The learners demonstrate an understanding of</i> : the occurrence of		11. explain how solar and lunar eclipses occur; and	S7ES-IVj- 11	1. BEAM 4. 11 Solar and Lunar Eclipse. Distance Learning Module. DLP 66.	 Flashlight Ordinary globe Sun-earth- moon model

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	SCIENCE EOUIPMENT
	eclipses				2. BEAM 4. 11 Solar	4. Small ball
					and Lunar	(e.a.
4. Eclipses	The learners	The learners shall be	11. explain how solar and lunar	S7ES-IVj-	Eclipse. Distance	styrofoam)
4.1. Solar Eclipse	demonstrate an	able to:	eclipses occur; and	11	Learning Module.	. ,
4.2. Lunar Eclipse	understanding of:				DLP 67.	
		analyze the			3. BEAM 4. 11 Solar	
	the occurrence of	advantage of the			and Lunar	
	eclipses	location of the			Eclipse. Distance	
		Philippines in relation			Learning Module.	
		to the climate,			DLP 68.	
		weather, and			4. Science and	
		seasons			Technology I:	
					Integrated	
					Science	
					Textbook for	
					First Year.	
					Villamil, Aurora	
					M., Ed.D. 1997.	
					pp. 290-291. *	
					5. Science and	
					Technology I:	
					Integrated	
					Science	
					lextbook.	
					NISMED. 2012.	
					pp. 324-325.	
					1. BEAM 4. 11 Solar	
			12. collect, record, and report data	S/ES-IVj-	and Lunar	
			on the beliefs and practices of	12	Eclipse. Learning	
					Guide. Eclipse.	
			eclipses.		September 2009.	
					2. DEAM 4. 11 Solar	
					allu Luildi Edinco, Dictoreo	
					Learning Module	
					DI P 69	

	GLOSSARY
Climate change	A significant and lasting change in the statistical distribution of weather patterns over periods ranging from decades to millions of years.
Earth	The third planet from the Sun; the densest and the fifth-largest of the eight planets in the Solar System.
Earthquake	The result of a sudden release of energy in the Earth's crust that creates seismic waves.
Ecosystem	A community of living organisms (plants, animals and microbes) in conjunction with the non-living components (air, water and mineral soil), interacting as a system.
Electricity	In physics, it is one of the basic quantitative properties describing a physical system or an object's state
Energy	The set of physical phenomena associated with the presence and flow of electric charge.
Environment	Surroundings.
Force	The exertion of physical strength.
Friction	The force which opposes the movement of one surface sliding or rolling over another with which it is in contact; the act of rubbing the surface of the body.
Gas	One of the four fundamental states of matter (the others being solid, liquid and plasma); its particles are widely separated from one another.
Gravity	A natural phenomenon by which all physical bodies attract each other.
Heat	The condition of being hot; the energy of a material body associated with the random motions of a constituent particles.
Light	An electromagnetic radiation that is visible to the human eye.
Liquid	One of the four fundamental states of matter (the others being solid, gas and plasma); the only state with definite volume but no fixed shape.
Living Things	Anything that has life; all objects that have self-sustaining processes.
Magnetism	A group of physical phenomenon associated with the interaction of a magnetic field with matter.
Matter	Anything that has space and mass.
Motion	A push or a pull; any movement or change in position.
Natural event	An event pertaining to, existing in or produced by nature.
Solar system	Comprises the Sun and its planetary system of eight planets, as well as a number of dwarf planets, satellites, and other objects that orbit the Sun.

GLOSSARY						
Solid	Characterized by structural rigidity and resistance to changes of shape or volume; one of the four fundamental states of matter.					
Sound	The sensation experienced when the brain interprets vibration within the structure of the ear caused by rapid variations of air pressure.					
Space	The distance between two points or objects.					
Volcanic eruption	A phenomenon in which material from the depths of the earth explodes to the surface in the form of lava, or clouds of gas and ashes.					
Weather	The state of the atmosphere, to the degree that it is hot or cold, wet or dry, calm or stormy, clear or cloudy.					

CODE BOOK LEGEND

Sample: S8ES-IId-19

LEGEN	D	SAMPLE		DOMAIN/ COMPONENT	CODE
	Learning Area and Strand/ Subject or Specialization	Science		Living things and their Environment	LT
First Entry	Grade Level	Grade 8	S8	Force, Motion and Energy	FE
				Earth and Space	ES
Uppercase Letter/s	Domain/Content/ Component/ Topic	Earth and Space	ES	Matter	мт
			-		
Roman Numeral *Zero if no specific quarter	Quarter	Second Quarter	II		
Lowercase Letter/s *Put a hyphen (-) in between letters to indicate more than a specific week	Week	Week Four	d		
			-		
Arabic Number	Competency	Infer why the Philippines is prone to typhoons	19		

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