

K to 12 BASIC EDUCATION CURRICULUM

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 demonstrate an 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	<i>The learners should be able to...</i> 1. describe the components of a scientific investigation;	S7MT-Ia-1	1. OHSP Integrated Science I. Quarter 1. Module 1. 2. BEAM I. Module 2. 3. Chemistry III Textbook. Mapa, Amelia P., Ph.D., et al. 2001. pp. 7-9. * 4. Science and Technology III: Chemistry Textbook. NISMED. 2012. pp. 3-5. 5. Science and Technology III. NISMED. 1997. pp-14-16.	
2. Diversity of Materials in the Environment 2.1 Solutions	<i>The learners demonstrate an understanding of:</i> some important properties of solutions	<i>The learners demonstrate an understanding of:</i> prepare different concentrations of mixtures according to uses and availability of materials	2. investigate properties of unsaturated or saturated solutions;	S7MT-Ic-2	1. EASE Science II. Module 7. 2. APEX Chemistry Solutions. Unit 2. Chapter 1. Lesson 1. 3. BEAM III. Unit 3. 8 Demonstrate Understanding of	Osmosis apparatus

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2. Diversity of Materials in the Environment 2.1 Solutions	<i>The learners demonstrate an understanding of:</i> some important properties of solutions	<i>The learners demonstrate an understanding of:</i> prepare different concentrations of mixtures according to uses and availability of materials	2. investigate properties of unsaturated or saturated solutions;	S7MT-Ic-2	Solutions. The Marvels of Solutions. September 2009. 4. Chemistry III Textbook. Mapa, Amelia P., Ph.D., et al. 2001. pp. 272-273. * 5. Science and Technology III: Chemistry Textbook. NISMED. 2012. pp. 114-119. 6. Science and Technology III. NISMED. 1997. pp. 129-133.	
			3. express concentrations of solutions quantitatively by preparing different concentrations of mixtures according to uses and availability of materials;	S7MT-Id-3	1. EASE Science II. Module 7. 2. APEX Chemistry Solutions. Unit 2. Chapter 1. Lessons 6-7. 3. BEAM III. Unit 3. 8 Demonstrate Understanding of Solutions. The Marvels of Solutions. September 2009. 4. Chemistry III Textbook.	1. Volumetric flask, 250 mL 2. Graduated cylinder, 100 mL 3. Triple beam balance 4. Beaker 5. Erlenmeyer flask

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2. Diversity of Materials in the Environment 2.1 Solutions	<i>The learners demonstrate an understanding of:</i> some important properties of solutions	<i>The learners demonstrate an understanding of:</i> prepare different concentrations of mixtures according to uses and availability of materials	3. 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	<i>The learners demonstrate an understanding of:</i> the properties of substances that distinguish them from mixtures	<i>The learners demonstrate an understanding of:</i> investigate the properties of mixtures of varying concentrations using available materials in the community for specific purposes	4. distinguish mixtures from substances based on a set of properties;	S7MT-Ie-f-4	1. EASE II. Module 3. Lesson 2. 2. BEAM III. Unit 2. 5 Demonstrate Skill in Identifying Chemical System. Pure Substance and Mixture. August 2009. 3. EASE I. Module 5. Lesson 3. 4. Chemistry III Textbook. Mapa, Amelia P., Ph.D., et al. 2001. pp. 38-42. 5. Science and	Penlight Thermometer, alcohol

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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	<i>The learners demonstrate an understanding of:</i> classifying substances as elements or compounds	<i>The learners demonstrate an understanding of:</i> 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	1. EASE II. Module 3. Lesson 3. 2. BEAM III. Unit 2. 6 Demonstrate Understanding of Elements. Elements and Compounds. August 2009. 3. EASE I. Module 5. Lesson 3. 4. Chemistry III Textbook. Mapa, Amelia P., Ph.D., et al. 2001. pp. 45-49. 5. Science and Technology III: Chemistry Textbook. NISMED. 2012. pp. 52-56. 6. Science and	Electrolysis apparatus Periodic table of elements

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	SCIENCE EQUIPMENT
					Technology III. NISMED. 1997. pp. 42-52.	
2.4 Acids and Bases	<p><i>The learners demonstrate an understanding of:</i></p> <p>the common properties of acidic and basic mixtures</p>	<p><i>The learners demonstrate an understanding of:</i></p> <p>properly interpret product labels of acidic and basic mixture, and practice safe ways of handling acids and bases using protective clothing and safety gear</p>	6. investigate properties of acidic and basic mixtures using natural indicators; and	S7MT-Ii-6	<ol style="list-style-type: none"> 1. BEAM III. Module 3. Lesson 3. 2. NSTIC Science Manual. Biology Science Manual 413. 1.d Acids and Bases. 3. NSTIC Science Manual. Chemistry Science Manual. pp. 34-39. 4. Chemistry III Textbook. Mapa, Amelia P., Ph.D., et al. 2001. pp. 51-52. * 5. Science and Technology III: Chemistry Textbook. NISMED. 2012. pp. 62-65. 	<ol style="list-style-type: none"> 1. beaker, 250 mL 2. Erlenmeyer flask 3. medicine droppers 4. pH meter 5. pH paper 6. test tubes 7. vials 8. volumetric flask, 250 mL
2.5 Metals and Non-metals	<p><i>The learners demonstrate an understanding of:</i></p> <p>properties of metals and nonmetals</p>		7. describe some properties of metals and non-metals such as luster, malleability, ductility, and conductivity.	S7MT-Ij-7	<ol style="list-style-type: none"> 1. APEX. Phases of Matter. Unit 1. Chapter 2. 2. EASE II. Module II. Lesson 3. 3. EASE I. Module 5. pp. 16-18 and 23. 	<p>Electrical conductivity apparatus</p> <p>Improvised thermal conductivity apparatus</p>

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					4. Science and Technology III. NISMED. 1997. pp. 48-51.	
Grade 7 – Living Things and Their Environment SECOND QUARTER/SECOND GRADING PERIOD						
I. Parts and Functions 1. Microscopy	<i>The learners demonstrate an understanding of:</i> the parts and functions of the compound microscope	<i>The learners should be able to:</i> employ appropriate techniques using the compound microscope to gather data about very small objects	<i>The learners should be able to...</i> 1. identify parts of the microscope and their functions;	S7LT-IIa-1	1. BEAM II. 1 Nature of Biology. Tools in Biology. April 2009. pp. 21-37.	Compound microscope
			2. focus specimens using the compound microscope;	S7LT-IIb-2	2. NSTIC Science Manual. Biology Science Manual 413M. 27b Microscope. 3. NSTIC Science Manual. Biology Science Manual 413M. 4 The Compound Microscope. 4. Science and Technology II: Biology Textbook. NISMED. 2012. pp. 12-15. 5. Science and Technology II: Biology Textbook. NISMED. 2004. pp. 12-15.	

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2. Levels of Biological Organization	<i>The learners demonstrate an 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 data about very small objects	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		4. differentiate plant and animal cells according to presence or absence of certain organelles;	S7LT-IIc-4	1. Science and Technology II: Biology Textbook. NISMED. 2012. pp. 22-28. 2. 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	1. APEX. Unit 2. The Unit Cycle of Life. 2. BEAM II. Module 2. The Basic Units of Life. 3. EASE Biology. Module 2. 4. Science and Technology II: Biology Textbook. NISMED. 2012. pp. 21-22.	

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

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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	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	1. MISOSA 5. Module 3. 2. BEAM 5. Unit 1. 1 The Human Reproductive System. Distance Learning Modules. DLP2. 3. BEAM 4. Unit 4. Distance Learning Modules. DLP31. 4. MISOSA 4. Module 6. 5. APEX. Biology Unit 5. 6. Science for Daily Use 4. Lozada, Buena A., et al. 2011. pp. 76-78. * 7. Science for Daily Use 5. Tan, Conchita T. 2012. pp. 6-10. * 8. Science and	

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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	<i>The learners should be able to:</i> conduct a collaborative action to preserve the ecosystem in the locality	9. differentiate biotic from abiotic components of an ecosystem;	S7LT-IIh-9	1. BEAM I. Unit 5. 1 Living Things and Their Interactions. June 2009. 2. EASE I. Module 9. 3. MISOSA 6. Components of an Ecosystem. 4. 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	1. MISOSA 6. Interrelationship among Organisms. 2. BEAM I. Unit 5. 1 Living Things and	

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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 demonstrate an understanding of:</i> organisms interacting with each other and with their environment to survive	<i>The learners should be able to:</i> 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-IIIi-11	MISOSA 6. Module 11.	
			12. predict the effect of changes in abiotic factors on the ecosystem.	S7LT-IIj-12	1. MISOSA 6. Components of an Ecosystem. 2. EASE I. Module 9.	
Grade 7 – Force, Motion and, Energy THIRD QUARTER/THIRD GRADING 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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<p>2. Motion Detectors</p> <p>I. Motion in One Dimension</p> <p>1. Descriptors of Motion</p> <p>1.1 Distance or Displacement</p> <p>1.2 Speed or Velocity</p> <p>1.4 Acceleration</p> <p>2. Motion Detectors</p>	<p><i>The learners demonstrate an understanding of:</i></p> <p>motion in one dimension</p>	<p><i>The learners shall be able to:</i></p> <p>conduct a forum on mitigation and disaster risk reduction</p>	<p><i>The learners should be able to...</i></p> <p>1. describe the motion of an object in terms of distance or displacement, speed or velocity, and acceleration;</p>	<p>S7FE-IIIa-1</p>	<p>3.EASE Physics. Module 10.</p> <p>4.Science and Technology I: Integrated Science Textbook for First Year. Villamil, Aurora M., Ed.D. 1998. pp. 73-74. *</p> <p>5.Science and Technology IV: Physics Textbook for Fourth Year. Rabago, Lilia M., Ph.D., et al. 2001. pp. 50-61. *</p>	<p>Stopwatch (digital); Cart-Rail System; Motorized Cart; Free-Fall Apparatus; Meter Stick; Magnetic Compass; Ticker Timer Set</p>
			<p>2. differentiate quantities in terms of magnitude and direction;</p>	<p>S7FE-IIIa-2</p>	<p>Science and Technology IV: Pysics Textbook. NISMED. 2012. p. 258.</p>	
			<p>3. create and interpret visual representation of the motion of objects such as tape charts and motion graphs;</p>	<p>S7FE-IIIb-3</p>	<p>Science and Technology IV: Physics Textbook. NISMED. 2012. p. 285.</p>	
<p>II. Waves</p> <p>1. Types of Waves</p> <p>2. Characteristics of Waves</p> <p>2.1 Amplitude</p> <p>2.2 Wavelength</p>	<p><i>The learners demonstrate an understanding of:</i></p> <p>waves as a carriers of energy</p>		<p>4. infer that waves carry energy;</p>	<p>S7LT-IIIc-4</p>	<p>1.OHSP. Module 15.</p> <p>2.EASE Physics. Module 15.</p> <p>3.Science and Technology IV: Physics Textbook for Fourth Year.</p>	

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3. Wave Velocity II. Waves 1. Types of Waves 2. Characteristics of Waves 2.1 Amplitude 2.2 Wavelength 3. Wave Velocity	<i>The learners demonstrate an understanding of:</i> waves as a carriers of energy	<i>The learners shall be able to:</i> conduct a forum on mitigation and disaster risk reduction			Rabago, Lilia M., Ph.D., et al. 2001. pp. 194-197. *	
			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 Technology IV: Physics Textbook for Fourth Year. Rabago, Lilia M., Ph.D., et al. 2001. pp. 202-203.	
			6. relate the characteristics of waves;	S7LT-IIIId-6	1.OHSP. Module 15. 2.EASE Physics. Module 15. 3.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-IIIId-7	1. EASE Physics. Module 16. 2. OHSP. Module 16. 3. Science and Technology IV: Physics Textbook. NISMED. 2012. pp. 371-372.	

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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	1.EASE Physics. Module 16. 2. OHSP. Module 16. 3. 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	1. EASE Physics. Module 16. 2. OHSP. Module 16. 3. 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-IIIIf-10	1. EASE Physics. Module 3. 2. 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-IIIIg-11	1.EASE Physics. Module 3. 2. Science and Technology IV:	

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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			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	1. MISOSA 4. Methods of Heat Transfer. 2. Science and Technology I: Integrated Science Textbook for First Year. Villamil, Aurora M., Ed.D. 1998. P. 97. * 3. 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 demonstrate an understanding of:</i> charges and the different charging processes		13. describe the different types of charging processes; and	S7LT-IIIj-13	1. EASE Physics. Module 6. Lesson 2. 2. Science and Technology IV: Physics Textbook for Fourth Year. Rabago, Lilia M., Ph.D., et al. 2001.	

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VI. Electricity 1. Charges 2. Charging processes	<i>The learners demonstrate an understanding of:</i> charges and the different charging processes	<i>The learners shall be able to:</i> suggest proper lighting in various activities			P. 290. *	
			14. explain the importance of earthing or grounding.	S7LT-IIIj-14	EASE Science II. Module 2. p. 19.	
Grade 7 – Earth and Space FOURTH QUARTER/FOURTH GRADING 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 resources	<i>The learners demonstrate an 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	<i>The learners should be able to...</i> 1. demonstrate how places on Earth may be located using a coordinate system;	S7ES-IVa-1	EASE 1. Module 14.	Ordinary globe/terrestrial globe
			2. describe the location of the Philippines with respect to the continents and oceans of the world;	S7ES-IVa-2		
			3. 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	1. EASE Science I. Module 11. 2. Science and Technology I: Integrated	

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					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 seasons	5. discuss how energy from the Sun interacts with the layers of the atmosphere;	S7ES-IVd-5	1.EASE Science I. Module 14. 2. Science and Technology I: Integrated Science Textbook. NISMED. 2012. pp. 310-311.	
			6. explain how some human activities affect the atmosphere ;	S7ES-IVe-6	1.EASE Science I. Module 14. Lesson 4. 2.BEAM I. 8 Changes in the Atmosphere. Learning Guides. Point and Non-point. September 2009. 3.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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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 seasons			2012. pp. 296-299.	
			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 demonstrate an understanding of:</i> the relationship of the seasons and the position of the Sun in the sky		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	1. Science and Technology I: Integrated Science Textbook. NISMED. 2012. pp. 308-310. 2. 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.	1. Flashlight 2. Ordinary globe 3. Sun-earth-moon model

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	SCIENCE EQUIPMENT
4. Eclipses 4.1. Solar Eclipse 4.2. Lunar Eclipse	eclipses <i>The learners demonstrate an understanding of:</i> the occurrence of eclipses	<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	11. explain how solar and lunar eclipses occur; and	S7ES-IVj-11	2. BEAM 4. 11 Solar and Lunar Eclipse. Distance Learning Module. DLP 67. 3. BEAM 4. 11 Solar and Lunar Eclipse. Distance Learning Module. DLP 68. 4. Science and Technology I: Integrated Science Textbook for First Year. Villamil, Aurora M., Ed.D. 1997. pp. 290-291. * 5. Science and Technology I: Integrated Science Textbook. NISMED. 2012. pp. 324-325.	4. Small ball (e.g. styrofoam)
			12. collect, record, and report data on the beliefs and practices of the community in relation to eclipses.	S7ES-IVj-12	1. BEAM 4. 11 Solar and Lunar Eclipse. Learning Guide. Eclipse. September 2009. 2. BEAM 4. 11 Solar and Lunar Eclipse. Distance Learning Module. DLP 69.	