

SCIENCE

Structuring Competencies in a Definitive Budget of Work

Grade	FIVE			
Science Discipline/Component	CHEMISTRY - MATTER			
Grade Level Standard	<p>At the end of Grade 5, <i>learners can decide whether materials are safe and useful by investigating about some of their properties. They can infer that new materials may form when there are changes in properties due to certain conditions.</i></p> <p>Learners have developed healthful and hygienic practices related to the reproductive system after describing changes that accompany puberty. They can compare different modes of reproduction among plant and animal groups and conduct an investigation on pollination. They have become aware of the importance of estuaries and intertidal zones and help in their preservation.</p> <p>Learners can describe the movement of objects in terms of distance and time travelled. Learners recognize that different materials react differently with heat, light, and sound. They can relate these abilities of materials to their specific uses.</p> <p>Learners can describe the changes that earth materials undergo. They can make emergency plans with their families in preparation for typhoons. They can observe patterns in the natural events by observing the appearance of the Moon.</p>			
	<p>PROPERTIES OF MATTER. 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.</p>			

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Domain	CHANGES THAT MATTER UNDERGO. 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.			
Performance Standard	The learner uses local, recyclable solid and/or liquid materials in making useful products			
Content Standard	The learners demonstrate understanding of... 1. properties of materials to determine whether they are useful or harmful; 2. materials undergo changes due to oxygen and heat			
Performance Task	1. Prepare a slogan/poster to disseminate information in the usefulness of materials 2. Recycling of waste materials into useful products 3. Compose a song/poem/rap on the importance of proper waste management			
CONTENT	LEARNING COMPETENCIES	CODE	NO. OF DAY/S TAUGHT	REMARKS
1. Properties	1. Use the properties of materials whether they are useful or harmful	S5MT-Ia-b-1		
1.1 Useful and Harmful Materials	1.1 Classify materials found in the environment according to use in personal body care products, cleaning agents, medicines	S5MT-Ia-b-1.1	1	

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	1.2 Classify materials found in the environment according to use in farm chemicals and reagents food	S5MT-Ia-b-1.2	1	
	1.3 Identify useful materials at home, in school and in the community	S5MT-Ia-b-1.3	1	
	1.4 Identify harmful materials at home, in school and in the community	S5MT-Ia-b-1.4	1	
	1.5 Classify useful and harmful materials at home, in school and community	S5MT-Ia-b-1.5	1	
	1.6 Identify the properties of materials that determine their uses, harmful effects	S5MT-Ia-b-1.6	1	
	1.7 Explain how different materials become useful to the community	S5MT-Ia-b-1.7	1	
	1.8 Explain how different materials become harmful to the community	S5MT-Ia-b-1.8	1	
	1.9 Create a slogan to disseminate information in the use of useful and harmful materials	S5MT-Ia-b-1.9	2	
	SUMMATIVE TEST		1	

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2. Changes that Materials Undergo	2. Investigate changes that take place under the following conditions:	S5MT-lc-d-2		
	presence or lack of oxygen (in air) and in applying heat)			
	2.1 Describe physical and chemical change operationally	S5MT-lc-d-2.1	1	
	2.2 Identify the characteristics of physical and chemical change	S5MT-lc-d-2.2	1	
	2.3 Differentiate physical change from chemical change	S5MT-lc-d-2.3	1	
	2.4 Investigate changes that happen in the presence of oxygen	S5MT-lc-d-2.4	1	
	2.5 Investigate changes that happen in the absence of oxygen	S5MT-lc-d-2.5	1	
	2.6 Investigate changes that happen in the application of heat	S5MT-lc-d-2.6	1	
	2.7 Identify evidences affecting chemical change:	S5MT-lc-d-2.7	1	
	a. Presence of oxygen;			
	b. Absence of oxygen;			
	c. Application of heat.			

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	2.8 Describe different changes brought by nature (e.g. global warming, pollution, etc.), humans and other living organisms (e.g. kaingin system, inceneration, etc.)	S5MT-Ic-d-2.8	2	
	2.9 List/Enumerate practices in preventing changes that pose harm/ hazard in the environment and living organisms	S5MT-Ic-d-2.9	1	
	SUMMATIVE TEST		1	
	3. Recognize the importance of recycle, reduce, reuse, recover and repair in waste materials	S5MT-le-g-3		
	3.1 Identify the 5R's components of proper waste management	S5MT-le-g-3.1	1	
	3.2 List the effects of improper wastes disposal	S5MT-le-g-3.2	1	
	3.3 Describe ways on how to reduce waste materials	S5MT-le-g-3.3	1	
	3.4 Identify ways on how to reuse waste materials	S5MT-le-g-3.4	1	
	3.5 Describe ways on how to repair possible waste materials	S5MT-le-g-3.5	1	

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	3.6 Describe ways on on how materials can be recovered from possible waste materials	S5MT-le-g-3.6	1	
	3.7 Identify ways on how to recycle waste materials	S5MT-le-g-3.7	1	
	3.8 Describe the benefits of using 5R's of waste management on living and non-living things	S5MT-le-g-3.8	1	
	3.9 Prepare a campaign material on proper waste disposal in school or in the community (e.g. poster, slogan, etc.)	S5MT-le-g-3.9	1	
	SUMMATIVE TEST		1	
	4. Design a product out of local and recyclable materials in making useful products	S5MT-lh-i-4		
	4.1 Recycling of old magazines/newspapers/yellowp aper/etc.	S5MT-lh-i-4.1	1	
	4.2 Recycling plastic bottles/containers	S5MT-lh-i-4.2	1	
	4.3 Recycling plastic straws	S5MT-lh-i-4.3	2	
	4.4 Recycling discarded slippers/rubbers	S5MT-lh-i-4.4	2	

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	4.5 Recycling other waste maste materials (e.g. candy/snack packages)	S5MT-lh-i-4.5	2	
	4.6 Compose a song/poem/rap on the importance of proper waste disposal	S5MT-lh-i-4.6	2	
	SUMMATIVE TEST		1	
TOTAL NUMBER OF DAYS			43	
PERIODICAL TEST			2	
OVERALL TOTAL NUMBER OF DAYS			45	