SCIENCE
Structuring Competencies in a Definitive Budget of Work

Grade	**SIX**
Science Discipline/Componen	**MATTER**
Grade Level Standard	At the end of Grade 6, learners ***recognize that when mixed together, materials may not form new ones thus these materials may be recovered using different separation techniques. They can prepare useful mixtures such as food, drinks and herbal medicines.*** Learners understand how the different organ systems of the human body work together. They can classify plants based on reproductive structures, and animals based on the presence or lack of backbone. They can design and conduct an investigation on plant propagation. They can describe larger ecosystems such as rainforests, coral reefs, and mangrove swamps. Learners can infer that friction and gravity affect how people and objects move. They have found out that heat, light, sound, electricity, and motion studied earlier are forms of energy and these undergo transformation. Learners can describe what happens during earthquakes and volcanic eruptions and demonstrate what to do when they occur. They can infer that the weather follows a pattern in the course of a year. They have learned about the solar system, with emphasis on the motions of the Earth as prerequisite to the study of seasons in another grade level.
Domain	**PROPERTIES OF MATTER.** 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. 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.
Performance Standard	The learners should be able to… 1. prepare beneficial and useful mixtures such as drinks, food, and herbal medicines. 2. separate desired materials from common and local products.

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Content Standard	The learners demonstrate understanding of… 1. the different types of mixtures and their characteristics 2. the different techniques to separate mixtures			
Performance Task	1. Prepare beneficial and useful mixtures such as drinks,food, and herbal medicines. 2. Prepare a process flow on how each component of a mixture will be separated from its mixture (teacher prepared mixture)			
CONTENT	**LEARNING COMPETENCIES**	**CODE**	**NO. OF DAY/S TAUGHT**	**REMARKS**
1. Properties	1. Describe the appearance and uses uniform and non-uniform mixtures	S6MT-Ia-c-1		
1.1 Mixture and their Characteristics	1.1 Describe the appearance of the combination of:	S6MT-Ia-c-1.1	2	
	a. Solid and solid;			
	b. Solid and liquid;			
	c. Liquid and liquid.			
	1.2 Describe the appearance of uniform (homogeneous) mixtures	S6MT-Ia-c-1.1	1	
	1.3 Describe the appearance of non-uniform (heterogeneous) mixtures	S6MT-Ia-c-1.2	1	
	1.4 Classify mixtures into uniform (homogeneous) and non-uniform (heterogeneous)	S6MT-Ia-c-1.3	1	
	1.5 Describe the characteristics of uniform and non-uniform mixture	S6MT-Ia-c-1.4	1	
	1.6 Identify common household solutions and their uses	S6MT-Ia-c-1.5	1	

	1.7 Define and identify the solute and the solvent in a solution	S6MT-Ia-c-1.6	1	
	1.8 Infer through simole experiments the conditions (e.g. size of particles, stirring of mixture, temperature) that affects the formation of a mixture	S6MT-Ia-c-1.7	2	
	1.9 Describe suspension as a non-uniform mixture	S6MT-Ia-c-1.8	1	
	1.10 Identify common suspensions and their uses	S6MT-Ia-c-1.9	1	
	1.11 Infer that colloid is a non-uniform mixture	S6MT-Ia-c-1.10	1	
	1.12 identify common household colloids and their uses	S6MT-Ia-c-1.11	1	
	1.13 Prepare beneficial and useful mixtures such as drinks,food, and herbal medicines	S6MT-Ia-c-1.12	1	
	SUMMATIVE TEST		1	
	2. Enumerate techniques in separating mixtures such as decantation, evaporation, filtering, sieving and using magnet	S6MT-Id-f-2		
	2.1 Enumerate and describe techniques in separating mixtures (approximate of 10 separation techniques)	S6MT-Id-f-2.1	2	

	2.2 Investigate the proces of separating mixture through decantation	S6MT-Id-f-2.2	1	
	2.3 Investigate the process of separating mixture through evaporation	S6MT-Id-f-2.3	1	
	2.4 Investigate the process of separating mixture through filtration	S6MT-Id-f-2.4	1	
	2.5 Investigate the process of separating mixture through sieving and use of magnet	S6MT-Id-f-2.5	1	
	2.6 Investigate the process of separating mixture through picking and scooping	S6MT-Id-f-2.6	1	
	2.7 Investigate the process of separating mixture through flotation	S6MT-Id-f-2.7	1	
	2.8 Investigate the process of separating mixture through simple distillation	S6MT-Id-f-2.8	1	
	2.9 Investigate the process of separating mixture through simple chromatography	S6MT-Id-f-2.9	1	
	2.10 Describe the uses and imporatnce of the different methods of separating mixtures in our daily lives	S6MT-Id-f-2.10	2	

	2.11 Prepare a process flow on how each component of a mixture will be separated from its mixture (teacher prepared mixture)	S6MT-Id-f-2.11	2	
	SUMMATIVE TEST		1	
	3. Tell the benefits of separating mixtures from products in community	S6MT-Ig-j-3		
	3.1 Cite instances wherein decantation as the process of separating mixtures is used to produce products which are beneficial to the community	S6MT-Ig-j-3.1	1	
	3.2 Cite instances wherein evaporation as the process of separating mixtures is used to produce products which are beneficial to the community	S6MT-Ig-j-3.2	1	
	3.3 Cite instances wherein filtration as the process of separating mixtures is used to produce products which are beneficial to the community	S6MT-Ig-j-3.3	1	
	3.4 Cite instances wherein sieving is used in the process of separating mixtures is used to produce products which are beneficial to the community	S6MT-Ig-j-3.4	1	

	3.5 Cite instances wherein magnet is used in the process of separating mixtures is used to produce products which are beneficial to the community	S6MT-Ig-j-3.5	1	
	3.6 Recover useful materials from waste products using the appropriate separation technique/s	S6MT-Ig-j-3.6	3	
	3.7 Prepare a process flow showing the steps necessary in the recovery of useful materials	S6MT-Ig-j-3.7	1	
	3.8 Present the output and the process flow in the recovery of useful materials	S6MT-Ig-j-3.7	2	
	SUMMATIVE TEST		1	
	TOTAL NUMBER OF DAYS		43	
	PERIODICAL TEST		2	
	OVERALL TOTAL NUMBER OF DAYS		45	