SCIENCE
Structuring Competencies in a Definitive Budget of Work

GRADE	**SIX**
Science Discipline/Component	**LIVING THINGS AND THEIR ENVIRONMENT**
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	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, Learners learn how non-flowering plants (spore-bearing and cone-bearing plants, ferns, and mosses) reproduce. They learn that plants and animals share common characteristics which serve as bases for their classification. Learners are introduced to the interactions among components of habitats such as tropical rainforests, coral reefs, and mangrove swamps.
Performance Standard	The learners should be able to make a chart showing healthful habits that promote proper functioning of the musculo-skeletal, integumentary, digestive, circulatory, excretory, respiratory, and nervous systems.

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Content Standard	The learners demonstrate understanding of how how the major organs of the human body work together to form organ systems.			
CONTENT	**LEARNING COMPETENCIES**	**CODE**	**NO. OF DAYS TAUGHT**	**REMARKS**
1. LIVING THINGS AND THEIR ENVIRONMENT				
1. Human Body Systems	***1. Explain how the organs of each organ system work together;***	***S6LTIIa-b-1***		
1.1 Musculo-skeletal	1.1 Identify and describe the functions of the organs of Musculo-Skeletal System	S6LTIIa-b-1.1.1	1	
1.2 Integumentary System	1.2 Describe how the organs of Musculo-Skeletal System work together	S6LTIIa-b-1.1.2	1	
1.3 Digestive System	1.2.1 Identify and describe the functions of the organs of Integumentary System and how it works.	S6LTIIa-b-1.2.1	1	
1.4 Respiratory System	1.3.1 Identify and describe the functions of the organs of Digestive System and how it works.	S6LTIIa-b-1.3.1	1	
1.5 Circulatory System	1.4.1 Identify and describe the functions of the organs of Respiratory System and how it works.	S6LTIIa-b-1.4.1	1	

1.6 Nervous System	1.5.1 Identify and describe the functions of the organs of Circulatory System	S6LTIIa-b-1.5.1	1	
	1.5.2 Describe how the organs of Circulatory System work together	S6LTIIa-b-1.5.2	1	
	1.6.1 Identify and describe the functions of the organs of Nervous System	S6LTIIa-b-1.6.1	1	
	1.6.2 Describe how the organs of Nervous System work together	S6LTIIa-b-1.6.2	1	
	SUMMATIVE TEST		1	
Performance Standard	The learners should be able to make a chart showing healthful habits that promote proper functioning of the musculo-skeletal, integumentary, digestive, circulatory, excretory, respiratory, and nervous systems.			
Content Standard	The learners demonstrate understanding of how the major organs of the human body work together to form organ systems.			
1. Human Body Systems	***2. Explain how the different organ systems work together;***	***S6LTIIc-d-2***		
1.1 Musculo-skeletal	1. Describe how Musculo-skeletal and Integumentary System work together	S6LTIIc-d-2.1	2	
1.2 Integumentary System	2. Describe how the organs of the Digestive, Respiratory and Circulatory Systems work together	S6LTIIc-d-2.2	2	
1.3 Digestive System	3. Describe how the nervous and integumentary systems work together	S6LTIIc-d-2.3	1	

1.4 Respiratory System	4. Describe how the nervous system controls all the organ systems of the body	S6LTIIc-d-2.4	1	
1.5 Circulatory System	5. Discuss healthful habits that promote proper functioning of all the organs systems in the body	S6LTIIc-d-2.5	1	
1.6 Nervous System	6. Make a chart showing healthful habits that promote proper functioning of all the organs systems in the body	S6LTIIc-d-2.6	1	
	SUMMATIVE TEST		1	
Performance Standard	The learners should be able to 1. make an inventory of vertebrates and invertebrates that are commonly seen in the community 2. practice ways of caring and protecting animals.			
Content Standard	The learners demonstrate understanding of the different characteristics of vertebrates and invertebrates.			
2. Animal	***3. Determine the distinguishing characteristics of vertebrates and invertebrates;***	***S6MTIIe-f-3***		
2.1 Vertebrates and Invertebrates	1. Describe the characteristics of vertebrates and invertebrates.	S6MTIIe-f-3.1	1	
2.1 Vertebrates and Invertebrates	2. Describe the characteristics of mammals and birds.	S6MTIIe-f-3.2	1	
	3. Describe the characteristics of reptiles, amphibians, and fishes	S6MTIIe-f-3.3	1	
	4. Classify vertebrates into mammals, birds, reptiles, amphibians, and fishes	S6MTIIe-f-3.4	1	

	5. Describe the characteristics of the following groups of invertebrates: - insects and spiders.	S6MTIIe-f-3.5	1	
	6. Describe the characteristics of the following groups of invertebrates: - worms, shellfish and snail	S6MTIIe-f-3.6	1	
	7. Classify invertebrates into insects, spiders, worms, shellfish and snail	S6MTIIe-f-3.7	1	
	8. Make an inventory of vertebrates and invertebrates that are commonly seen in the community. Practice ways of caring and protecting these animals.	S6MTIIe-f-3.8	1	
	SUMMATIVE TEST		1	
Performance Standard	The learners should be able to 1. make a multimedia presentation on how parts of the reproductive system of spore-bearing and cone-bearing plants ensure their survival 2. make a flyer on how plants can be propagated vegetatively.			
Content Standard	The learners demonstrate understanding of how non-flowering plants reproduce.			
3. Plants	***4. Distinguish how spore-bearing and cone-bearing plants reproduce.***	***S6MTIIg-h-4***		
3.1 Reproduction of Non-flowering plants	1. Identify and describe common examples of spore-bearing plants	S6MTIIg-h-4.1	1	
	2. Discuss how spore-bearing plants reproduce	S6MTIIg-h-4.2	1	

	3. Make a multimedia presentation on how spore-bearing plants ensure their survival	S6MTIIg-h-4.3	1	
	4. Identify and describe common examples of cone-bearing plants	S6MTIIg-h-4.4	1	
	5. Differentiate how spore-bearing and cone-bearing plants reproduce	S6MTIIg-h-4.5	1	
	6. Make a flyer on how spore-bearing and cone-bearing plants can be propagated vegetatively	S6MTIIg-h-4.6	1	
	SUMMATIVE TEST		1	
Performance Standard	The learners should be able to form discussion groups to tackle issues involving protection and conservation of ecosystems that serve as nurseries, breeding places, and habitats for economically important plants and animals			
Content Standard	The learners demonstrate understanding of the interactions for survival among living and non-living things that take place in tropical rainforests, coral reefs, and mangrove			

II. Ecosystems				
1. Interactions Among Living Things	***5. Discuss the interactions among living things and nonliving things in tropical rainforests, coral reefs and mangrove swamps;***	***S6MTIIi-j-5***		

2. Tropical rainforests	1. Identify the living and non-living things in tropical rainforests and describe the appearance of tropical rain forests	S6MTIIi-j-5.1	1	
2.1 Coral reefs	2. Explain the Interactions among living and non-living things in a tropical rainforest in terms of: a. harmful and beneficial interactions b. Effects of interaction	S6MTIIi-j-5.2	1	
2.2 Mangrove swamps	3. Identify the living and non-living things in coral reefs and describe how tropical coral reefs and mangrove swamps appear.	S6MTIIi-j-5.3	1	
	4. Explain the Interactions among living and non-living things in mangrove swamps in terms of: a. harmful and beneficial interactions and b. effects of interaction.	S6MTIIi-j-5.4	1	
	6. Explain the need to protect and conserve tropical rainforests, coral reefs and mangrove swamps.	***S6MTIIi-j-6***		
	1. Enumerate ways on how to protect and conserve Tropical rainforests, coral reefs and mangrove swamps.	S6MTIIi-j-6.1	1	

	2. Discuss the harmful effects and implications to communities, environments and human beings if Tropical rainforests, coral reefs and mangrove swamps are not protected and conserved.	S6MTIIi-j-6.2	1	
	3. Performance Tasks *(by group)* The students should be able to discuss specific issues involving protection and conservation of ecosystems that serve as nurseries, breeding places and habitats for economically important plant and animals. *(Teachers will provide contextualized ecosystems for each group)*	S6MTIIi-j-6.3	1	
	SUMMATIVE TEST		1	
		TOTAL NUMBER OF DAYS	**43**	
		PERIODICAL TEST	2	
		TOTAL NUMBER OF DAYS	**45**	