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Most Essential Learning Competencies (MELCs)

			5 the latitude of an area to the amount of energy the area receives 6 tilt of the Earth and the seasons		
	the occurrence of eclipses		Explain how solar and lunar eclipses occur using models	Week 6	

Grade Level: Grade 8
Subject: Science

Quarter	**Content Standard** *The learners demonstrate understanding of...*	**Performance Standard** *The learners should be able to...*	**Most Essential Learning Competencies**	**Duration**	**K to 12 CG Code**
1st	Newton's three laws of motion	develop a written plan and implement a "Newton's Olympics"	Investigate the relationship between the amount of force applied and the mass of the object to the amount of change in the object's motion	Week 1	**S8FE-Ia-15**
			Infer that when a body exerts a force on another, an equal amount of force is exerted back on it	Week 2	**S8FE-Ia-16**

	work using constant force, power, gravitational potential energy, kinetic energy, and elastic potential energy		Identify and explain the factors that affect potential and kinetic energy	Week 2-3	
	the propagation of sound through solid, liquid, and gas		Investigates the effect of temperature to the speed of sound	Week 4	
	some properties and characteristics of visible light	discuss phenomena such as blue sky, rainbow, and red sunset using the concept of wavelength and frequency of visible light	Explain the hierarchy of colors in relation to the energy of visible light	Week 4	**S8FE-If-27**
	heat and temperature, and the effects of heat on the body		Differentiate between heat and temperature at the molecular level	Week 4	**S8FE-Ig-29**
	current- voltage-resistance relationship, electric power, electric energy, and home circuitry		Infer the relationship between current and voltage	Week 5-6	
			Explain the advantages and disadvantages of series and parallel connections in homes	Week 7	**S8FE-Ii-31**
			Explain the functions of circuit breakers, fuses, earthing, double insulation, and other safety devices in the home	Week 7	**S8FE-Ii-33**
2nd	the relationship between faults and earthquakes	1. participate in decision making on where to build structures based on knowledge of the location of active faults in the community	Using models or illustrations, explain how movements along faults generate earthquakes	Week 1	**S8ES-IIa-14**
			Differentiate the 1 epicenter of an earthquake from its focus;	Week 1-2	**S8ES-IIa-15**

		2. make an emergency plan and prepare an emergency kit for use at home and in school	2 intensity of an earthquake from its magnitude; 3 active and inactive faults		
			Explain how earthquake waves provide information about the interior of the earth	Week 3	**S8ES-IIc-17**
	the formation of typhoons and their movement within the PAR	1. demonstrate precautionary measures before, during, and after a typhoon, including following advisories, storm signals, and calls for evacuation given by government agencies in charge 2. participate in activities that lessen the risks brought by typhoons	Explain how typhoon develops and how it is affected by landmasses and bodies of water	Week 4-5	
			Trace the path of typhoons that enter the Philippine Area of Responsibility (PAR) using a map and tracking data	Week 5	**S8ES-IIf-21**
	characteristics of comets, meteors, and asteroids	discuss whether or not beliefs and practices about comets and meteors have scientific basis	Compare and contrast comets, meteors, and asteroids	Week 6	**S8ES-IIg-22**
3rd	the particle nature of matter as basis for explaining properties, physical changes, and structure of substances and mixtures	present how water behaves in its different states within the water cycle	Explain the properties of solids, liquids, and gases based on the particle nature of matter;	Week 1-2	**S8MT-IIIa-b-8**

			Explain physical changes in terms of the arrangement and motion of atoms and molecules;	Week 3-4	**S8MT-IIIc-d-9**
	the identity of a substance according to its atomic structure		Determine the number of protons, neutrons, and electrons in a particular atom;	Week 5-6	**S8MT-IIIe-f-10**
	the periodic table of elements as an organizing tool to determine the chemical properties of elements		Use the periodic table to predict the chemical behavior of an element.	Week 7-8	**S8MT-IIIi-j-12**
4th	1. the digestive system and its interaction with the circulatory, respiratory, and excretory systems in providing the body with nutrients for energy 2. diseases that result from nutrient deficiency and	present an analysis of the data gathered on diseases resulting from nutrient deficiency	Explain ingestion, absorption, assimilation, and excretion	Week 1	**S8LT-IVa-13**

	ingestion of harmful substances, and their prevention and treatment				
	1. how cells divide to produce new cells 2. meiosis as one of the processes producing genetic variations of the Mendelian Pattern of Inheritance	report on the importance of variation in plant and animal breeding	Compare mitosis and meiosis, and their role in the cell-division cycle	Week 2	**S8LT-IVd-16**
			Explain the significance of meiosis in maintaining the chromosome number	Week 2	**S8LT-IVe-17**
			Predict phenotypic expressions of traits following simple patterns of inheritance	Week 3	**S8LT-IVf-18**
	1. the concept of a species 2. the species as being further classified into a hierarchical taxonomic system	report (e.g., through a travelogue) on the activities that communities engage in to protect and conserve endangered and economically important species	Explain the concept of a species	Week 4	**S8LT-IVg-19**
			Classify organisms using the hierarchical taxonomic system	Week 4	**S8LT-IVh-20**
			Explain the advantage of high biodiversity in maintaining the stability of an ecosystem	Week 5	**S8LT-IVh-21**
	the one-way flow of energy and the cycling of materials in an ecosystem	make a poster comparing food choices based on the trophic levels'	Describe the transfer of energy through the trophic levels	Week 5	**S8LT-IVi-22**
			Analyze the roles of organisms in the cycling of materials	Week 6	**S8LT-IVi-23**
			Explain how materials cycle in an ecosystem	Week 6	**S8LT-IVi-24**
			Suggest ways to minimize human impact on the environment	Week 7	**S8LT-IVj-25**

Grade Level: Grade 9
Subject: Science

Quarter	**Content Standard** *The learners demonstrate understanding of...*	**Performance Standard** *The learners should be able to...*	**Most Essential Learning Competencies**	**Duration**	
1st	1. how the different structures of the	conduct an information dissemination activity on	Explain how the respiratory and circulatory systems work together to	Week 1-2	**S9LT-Ia-b-26**