USER ADVISORY

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The Grade 7 and Grade 8 CMaps were written by the PEAC JHS Trainers, and some of them were used as exemplars, serving as presentation samples and workshop activities during the 2024 and 2025 In-Service Training for Junior High School Teachers in private schools.

The CMaps are aligned with the Revised K-10 Curriculum of DepEd, which is being implemented in phases nationwide starting SY 2024-2025. Teachers from both private and public schools may use these CMaps to support the implementation of the Revised K-10 Curriculum.

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Unit Curriculum Map

Q1 Science 8 Life Science

TOPIC/QUARTER	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCIES	ASSESSMENT	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
1. Organ systems working together	Learners learn that: 1. Organ systems work together for the growth and survival of the organism.	*By the end of the Quarter*, learners demonstrate the use of models, flow charts, and diagrams to illustrate how body systems work together for the growth and survival of an organism. They represent patterns of inheritance and predict simple ratios of offspring. They explain that the classification of living things shows the diversity and unity of living things. They describe the processes of respiration and photosynthesis and plan and record a scientific investigation to verify the raw materials needed.	**A.1.** Using a labeled diagram, trace how food and liquids travel through the digestive tract from the mouth to the anus	**A.1**. Multiple Choice	**A.1.1** Flowchart **A.1.2** Song Mnemonics	**A.1.** Worksheet: Journey of Digestion	**A.1.** Scientific Literacy
			A.2. Explain how five digestive processes (i.e.mechanical processing, secretion, digestion, absorption, and elimination) work	**A.2.** Essay	**A.2.** Stick-it Together	**A.2.** Worksheet https://www.nationalgeographic.com/science/article/digestive-system	**A.2.** Responsibility
			A.3. Explain how body systems work together, such as digestion and excretion using models, flow charts, diagrams, and simulation.	**A.3.** Diagram Creation	**A.3.** Body System Diagram Analysis	**A.3.** https://www.khanacademy.org/science/hs-bio/x230b3ff252126bb6:from-cells-to-organisms/x230b3ff252126bb6:human-body-systems/a/hs-the-digestive-and-excretory-systems-review	**A.3.** Teamwork

TOPIC/QUARTER	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCIES	ASSESSMENT	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
2. Heredity	2. Inherited traits passed from parents to offspring are governed by the rules on the patterns of inheritance.	They use flow charts and diagrams to explain cycles in nature.	**B.1.** Represent patterns of inheritance of a simple dominant/ recessive characteristic through generations of a family (i.e. Monohybrid cross, dihybrid cross and pedigree chart)	**B.1.** Problem Solving	**B.1.1** Monohybrid/Dihybrid Cross Simulation B.1.2 Pedigree creation	**B.1**. Worksheet https://biology-roots.com/wp-content/uploads/2021/01/FreebieMonohybridCrossPracticeProblemsGivePeasAChance-1.pdf	**B.1.** Critical Thinking
			B.2. Predict simple ratios of offspring's genotypes and phenotypes in crosses involving dominant/recessive gene pairs	**B.2.** CER	**B.2.** Predict-Observe-Explain	**B.2**. Dihybrid Crosses http://bit.ly/4ga54fg	**B.2.** Critical Thinking
3. Taxonomic classification	3. Classification of living things shows life's diversity.		**C.1** Describe the importance of the six-kingdom system (i.e.Archaebacteria, Eubacteria,Protista,Fungi, Plantae,and Animalia) and the three-domain system (i.e. Archaea , Bacteria, and Eukarya) of classification of living things	**C.1** Short Answer	**C.1** Fan N' Pick	**C.1**. Worksheet Textbook https://teachinginthefastlane.com/2017/03/cooperative-learning-strategy-fan-pick.html	**C.1**. Stewardship

TOPIC/QUARTER	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCIES	ASSESSMENT	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
			C.2. Explain the taxonomic classification of humans under Class Mammalia and Order Primates	**C.2**. Essay	**C.2.** Placemat Organizer	**C.2**. Title of the Article: Primate Taxonomy and Recent Studies of NonHuman Primate https://doi.org/10.1111/j.1749-6632.1962.tb13656.x	**C.2.** Critical Thinking
4. Photosynthesis, respiration and cycles in nature	4.Photosynthesis and respiration are processes that show how living things obtain energy and nutrients from the environment.		**D.1.** Describe how three plant organs (leaf, stem, roots) work together as the transport systems (i.e. xylem and phloem)	**D.1.** Short Answer	**D.1.** Noting details with Graphic Organizer (SUM It UP)	**D.1**. Title of the Article: Means of Transportation in Plants https://byjus.com/biology/transportation-in-plants/	**D.1.** Environmental Stewardship
			D.2. Describe the process of photosynthesis and respiration (raw materials, products, and the specific cell organelles where they occur) using information from secondary sources.	**D.2.** Diagram Breakdown	**D.2** Comparison Chart	**D.2.** Photosynthesis and Cellular Respiration: Crash Course Botany #5 https://www.youtube.com/watch?v=WzOrF5W4l3Q	**D.2.** Communication

TOPIC/QUARTER	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCIES	ASSESSMENT	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
			D.3. Using flow charts and labeled diagrams, explain (i.e. exchange of materials such as carbon and oxygen, and the flow of energy from the sun to the energy pyramid) the role of plants and animals in the cycles of nature, such as the carbon, oxygen, and water cycles.	**D.3**. Diagram Analysis	**D.3.** CER: Situation Analysis	**D.3.** Data Analysis	**D.3.** Excellence
			D.4. Explain that the interdependence and continuity of systems support the survival and diversity of living organisms.	**D.4** CER	**D.4.** CER	**D.4.** Article Analysis (Modeling) Article Analysis (Guided Practice) How did grasses alter Earth's ecosystem? with Process Questions Article Analysis (Independent Practice) Development of Agriculture	**D.4.** Critical Thinking

TOPIC/QUARTER	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCIES	ASSESSMENT	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
			D.5 Plan a scientific investigation to determine the essential raw materials (i.e. light, carbon dioxide, and water) required for photosynthesis.	**D.5** Scientific Investigation	**D.5.**Virtual Lab Simulation	**D.5.**Photosynthesis Virtual Lab https://www.olabs.edu.in//?sub=79&brch=16&sim=126&cnt=4	**D.5** Innovation
			D.6. Create a visual representation (e.g. flow chart, diagram) that shows how systems work in response to threats (e.g. natural, man-made, induced) within and among living organisms for survival and sustainability.	**D.6.** Performance Task - Creation of Model	**D.6.1** Modeling *Presentation of a sample output (model, flowchart, diagram) and "think-aloud"* **D.6.2** Guided Practice *Providing a step-by-step guide to creating a model, as well as a template* **D.6.3** Independent Practice *Students follow the steps and the template, and self-assess their work*	**D.6.** Template and Checklist	**D.6**. Innovation

TOPIC/QUARTER	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCIES	ASSESSMENT	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
					using a checklist/rubric		

Unit Curriculum Map

Q2 Science 8 Science of Materials

TOPIC/QUARTER	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	ASSESSMENTS	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
Second 1. Use of timelines and charts 2. The Atomic Model 3. Subatomic particles	**The Learners learn that:** **1**. The use of timeline and charts can illustrate scientific knowledge of the structure of the atom has evolved over time. 2. The current structure of the atom includes subatomic particles, their symbol, mass, charge, and location.	By the end of the Quarter, learners demonstrate an understanding of the structure of the atom and how our understandings have changed over time. They draw models of the atom and use tables to represent the properties of subatomic particles. They demonstrate their knowledge and understanding of the periodic table by identifying the elements, their symbols, their valence electrons, and their positions within the groups and periods. They design and/or create timelines or documentaries as interesting learning tools.	**A.1**. develop a timeline for the historical background of the development of the current Atomic Model (five key scientists/models: Democritus/The "Indivisible Particle" Idea, John Dalton /The "Solid Sphere" Model, J.J. Thomson/The "Plum Pudding" Model, Ernest Rutherford/The "Nuclear" or "Planetary" Model, Niels Bohr/ The "Bohr" Model (Quantized Orbits), Erwin Schrödinger/The "Electron Cloud" or Quantum Mechanical Model) that identifies tiny particles as atoms	**A.1** Matching	**A.1** Noting Details with Graphic Organizer	**A.1.1** GCSE Chemistry - History of the Model of the Atom #7 https://www.youtube.com/watch?v=sG6QoLxwIw4&t=20s&ab_channel=Cognito **A.1.2.** https://timeline.knightlab.com/	**A1.** Curiosity/Inquisitiveness
			A2. draw the structure of an atom in terms of the nucleus (protons	**A.2** Diagram analysis	**A.2** Unveiling the Atom's Blueprint:	**A.2** Bohr Atomic Model Cards for First 20 Elements	**A.3** Systematic Thinking

TOPIC/QUARTER	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	ASSESSMENTS	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
			and neutrons) and electron shells (where electrons are located);		Inside the Smallest Building Blocks	https://members.teachbesideme.com/wp-content/uploads/2017/08/Bohr-Atomic-Model-Cards-for-First-20-Elements.pdf	
			A.3 Write the ground state electron configuration of an element.	**A.3** Identification	**A.3** Writing the Electron Configuration of Elements	**A.3** Electron Configuration Worksheet https://www.mayfieldschools.org/downloads/electron_configuration_practice_workshe_12.pdf	**A.3** Competence
			A4. Differentiate the subatomic particles protons, neutrons, and electrons in terms of their symbol, mass, charge, and location within an atom;	**A4.** Table Completion	**A4.** The Atom's Inner Crew: Protons, Neutrons, & Electrons	**A4.1.** https://www.studocu.com/ph/document/west-visayas-state-university/bachelor-of-science-in-biology/chemistry-subatomic-particles-pactice-worksheet/24378163 **A.4.2.** https://www.chemistrylearner.com/worksheets/atomic-structure-worksheets	**A4.** Orderliness/ Systematic Thinking

TOPIC/QUARTER	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	ASSESSMENTS	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
			A5. Calculate the number of protons, neutrons, and electrons in the atom of several elements, such as aluminum;	**A5.** Scenario Based - Calculation Problem	**A5.** Counting Protons, Neutrons, and Electrons	**A5.** Periodic Table of Elements Khan Academy on Atomic Structure	**A5.** Logical Reasoning/Problem Solving
4. Elements and compounds	3. Elements and compounds are identified as pure substances.		**B1**. Describe the properties of pure substance as: a. having fixed chemical composition, examples of which are elements and compounds, and b. that all the atoms of an element have a unique number of protons;	**B1**.True or False	**B1.** Pure and Sure: Unlocking the Secrets of Pure Substances (Station Rotation)	**B1**. **PhET "Build an Atom" Simulation**	**B1.** Self Discipline
5. The Periodic table	4. The periodic table is a useful tool to determine the chemical properties of elements.		**C1.** Discuss the significant contributions of early scientists (Dmitri Mendeleev, John Newlands Henry Moseley, Lothar Meyer) in the	**C1**. Multiple Choice	**C1.** Periodic Pioneers: The Minds Behind the Table	**C1.1** https://www.youtube.com/watch?v=0RRVV4Diomg&t=29s **C1.2** https://www.rs	**C1**. Curiousity

TOPIC/QUARTER	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	ASSESSMENTS	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
			development of the periodic table;				
			C2. Identify the names and symbols of the first 20 or several common elements (i.e. Hydrogen, Oxygen, Nitrogen, Carbon, Sodium, Sulfur, Chlorine, and Helium) of the periodic table.	**C2.** Identification	**C2.** Elemental ID: Mastering Names & Symbols	**C2.** **Interactive Periodic Table** **A.8.2. Video: Introduction to the First 20 Elements**	**C2.** Appreciation for Universality
			C3 Explain how the electron structure of an atom, particularly the number of valence electrons, determines its position within a group on the periodic table.	**C3**.Essay	**C3.** Valence Vibes: Electrons, Groups, and the Periodic Code – Analysis on relationships	**C3.1.** Image Source: https://www.acs.org/middleschoolchemistry/lessonplans/chapter4/lesson3.html **C3.2** https://www.acs.org/middleschoolchemistry/simulations/chapter4/lesson3.html#simulation430 **C3.3** Science Textbook (Grade 8) relevant chapters on Atomic Structure and the Periodic Table: **C3.4** Teacher-created materials	**C3.** Critical Thinking

TOPIC/QUARTER	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	ASSESSMENTS	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
			C4. Explain that the arrangement of elements in the periodic table as 7 periods and 18 groups is based on their atomic structure and chemical properties, such as reactivity, electronegativity, atomic size, metallic character, ion formation;	**C4.** Claim-Evidence-Reasoning	**C4.** The Analysis of the Periodic Table's Secrets - Where Elements Belong! – CER activity	**C4.1** https://www.youtube.com/watch?v=jI__JY7pqOM **C4. 2** Link: https://www.rsc.org/periodic-table/ (Recommended for clear visualization of trends) OR https://ptable.com/	**C4.** Skepticism
			C5. Generalize that the identity, properties, and interactions of substances can be explained using scientific patterns and relationships.	**C5.** Unlocking Matter's Secrets - Generalization Task	**C5.** Atomic Clues: Discovering Patterns in Substances and the Periodic Table – Using Generalization Table	**C5.**	**C5.** Objectivity
			C6. Create informational posters that show how the structure of substances helps people understand the chemical elements in everyday products or technologies, encouraging smart and responsible choices.	**C6.** PERFORMANCE TASK	**C6.** Scaffold Activities using Direct Instruction	**C6.**	**C6.** Resilience, open mindedness and collaboration

Unit Curriculum Map

Q3 Science 8 Earth and Space Science

TOPIC	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	ASSESSMENTS	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
3rd A. Distribution of the continents Crustal features and interaction	Learners learn that: 1. The distribution of continents and oceans on Earth is related to the presence of the oceanic crust and continental crust. 2. Volcanic terrain is built by the slow accumulation of erupted lava. 3. The earth's surface is made of separate and movable plates.	The learners are able to: By the end of the Quarter, learners demonstrate an appreciation of the large-scale features of the 'blue planet' Earth and relate those features to the geological characteristics of the upper crustal layers of the Earth. They identify and describe the nature and impact of volcanic activity in building new crust and identify that these crust forming processes account for patterns and changes in the distribution of volcanoes, earthquakes, and mountain chains that have occurred over	**A1.** Identify the proportion of the Earth's surface covered by water (about 71%) and land (about 29%) using data from maps, globes, or other visual representations. (A)	**A1.** Multiple Choice	**A1.** Mnemonics: Image	**A1.** Water distribution on earth https://www.vedantu.com/evs/water-distribution-on-earth	**A1- A6.** Scientific Literacy
			A2. Gather relevant information from secondary sources (such as textbooks, online articles, and encyclopedias) to name and describe the Earth's upper crustal layers, specifically the continental and oceanic crust. (A)	A**2.** Multiple Choice	**A2.** Noting Details with a Graphic Organizer: 2- Column Table	**A2.** Teacher-made Learning Activity Sheet Continental Crust https://www.britannica.com/science/continental-crust	
			A3. Identify how oceanic crust and continental crust is associated	**A4**. Multiple choice	**A4**. Noting Details with a Graphic Organizer	**A4**. Teacher-made Learning Activity Sheet	

TOPIC	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	ASSESSMENTS	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
		time. Learners draw on their understanding of the relationships between landforms and oceans to explain the formation and impacts of typhoons. They also identify that predictable interactions of the Sun-Earth-Moon system result in tidal effects.	with the Earth's lithospheric plates. (A)			Lithospheric Plate https://www.encyclopedia.com/science/encyclopedias-almanacs-transcripts-and-maps/lithospheric-plates?utm_source=chatgpt.com	
			A4. Describe the different types of volcanoes (shield, composite, and cinder volcanoes) around the world according to their activity (active, dormant, extinct), type of eruption (effusive or explosive), and location in the crust. (A)	**A3**. Multiple Choice	**A3**. Noting details with graphic organizer (4-column table)	**A4**. Teacher-made Learning Activity Sheet United States Geological Survey (USGS) – Mauna Loa: https://www.usgs.gov/volcanoes/mauna-loa Mount Mayon (Albay, Philippines) Philippine Institute of Volcanology and Seismology (PHIVOLCS) – Mayon Volcano: https://www.phivolcs.dost.gov.ph/index.php/volcano-hazard/volcanoes-of-	

TOPIC	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	ASSESSMENTS	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
						the-philippines/37-volcanoes-of-the-philippines/332-mayon-volcano **Parícutin (Mexico)** Smithsonian Institution – Global Volcanism Program (Parícutin): https://volcano.si.edu/volcano.cfm?vn=341080 **Mount Fuji (Japan)** Japan Meteorological Agency – Mount Fuji: https://www.data.jma.go.jp/svd/vois/data/tokyo/306_Fuji/306_index.html **Kilauea (Hawaii, USA)** United States Geological Survey (USGS) – Kilauea: https://www.usgs.gov/volcanoes/kilauea	
			A5.	**A5**.	**A5**.	**A5**.	

TOPIC	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	ASSESSMENTS	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
			Relate the shape of a volcano's cone (shield, composite, and cinder) to the composition of its magma. (M)	Extended Response	Placemat Organizer	Teacher-made worksheet Determinants of size and shape https://www.britannica.com/science/volcano/Determinants-of-size-and-shape?utm_source=chatgpt.com	
			A6. Relate the location and distribution of active volcanoes, earthquake epicenters, and major mountain belts to the distribution of oceanic crust and continental crust. (M)	**A6**. Map analysis with CER	**A6**. Close reading activities with map analysis	**A6**. Global Volcanic Distribution Patterns. https://www.researchgate.net/publication/377404328_Examine_the_Global_Distribution_Patterns_of_volcanoes_and_Tectonic_Plate_Boundaries	
B. Typhoons	4. Bodies of water and landforms affect typhoons.		**B1**. Gather information from the Department of Science and Technology (DOST) and other reliable websites to identify	**B1**. Multiple Choice	**B1**. Gamification	**B1**. DOST DRRM Portal NDRRMC Website	**B1- C2.** Resilience and Preparedness Resilience and Preparedness Resilience and Preparedness

TOPIC	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	ASSESSMENTS	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
			how authorities support communities affected by typhoons. (This includes actions such as disaster preparedness programs, emergency response measures, and recovery and rehabilitation efforts. (A)				
			B2. Gather information from secondary sources to explain how typhoons develop, and why the Philippines is prone to typhoons. (M)	**B2**. C-E-R	**B2**. Stick it Together	**B2**. Article Source:https://www.pagasa.dost.gov.ph/information/about-tropical-cyclone	
			B3. Discuss how bodies of water and landforms influence the development, movement, and impact of typhoons. (M)	**B3**. Extended Response	**B3**. Compass Point	**B3**. Philippine Atmospheric, Geophysical, and Astronomical Services Administration (PAGASA): Typhoon Tracks and Weather Maps https://www.pagasa.dost.gov.ph/informatio	

TOPIC	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	ASSESSMENTS	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
						n/about-tropical-cyclone	
			B4. Use a map and a record of tracking data to trace the path of typhoons that enter the Philippine Area of Responsibility (PAR). (M)	**B4**. Extended response (typhoon tracking)	**B4**. Typhoon tracking activity	**B4**. Teacher-made Learning Activity Sheet	
C. Tides	5. The interaction between the Sun, Earth, and Moon causes tides.		**C1**. Draw on information from secondary sources (scientific articles, reports, and studies) to identify situations where tidal differences could be exploited to generate renewable energy. (A)	**C1**. Enumeration	**C1**. Noting Details with a Graphic Organizer	**C1**. International Renewable Energy Agency (IRENA): Tidal Energy Reports and Case Studies https://www.irena.org/Publications/2014/Jun/Tidal-Energy	
			C2. Relate the relative movements of the Earth, Moon, and Sun (such as their alignment during phases like new and full moons, as well as their gravitational interactions) with the	**C2**. Error Analysis	**C2**. Simulation Analysis	**C2**. Interactive Simulation of Tides https://beltoforion.de/en/tides/simulation.php#idStart	

TOPIC	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	ASSESSMENTS	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
			occurrence of tides(high tides, low tides, spring tides, and neap tides). (M)				
			A1- C2. Create a multimedia presentation (video, infographic, or interactive model) that showcases the cause-and-effect relationships of a real-world natural event (e.g., volcanic eruption, typhoon, earthquake, tsunami, or tidal changes) and proposes preparedness strategies to minimize its impact." (T)	**A1- C2.** Performance Task: Multimedia Presentation	**A1- C2.** Scaffold Activity 1: Understanding Typhoon Formation Scaffold Activity 2: Mapping Typhoon Paths Scaffold Activity 3: Impact and Response Research	**A1- C2.** PhET Interactive Simulations (phet.colorado.edu): Typhoon Formation simulation National Geographic: Typhoon Formation and Climate Change (https://www.nationalgeographic.com/weather/global-weather/weather-tropical-storms/) Philippine Atmospheric, Geophysical, and Astronomical Services Administration (PAGASA): Typhoon tracking data (https://www.pagasa.dost.gov.ph/) World Bank Climate Change Data: (https://climateknowle	

TOPIC	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	ASSESSMENTS	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
						dgeportal.worldbank.org/region/east-asia-and-pacific/country/philippines) Department of Science and Technology (DOST): Information on disaster preparedness (https://www.dost.gov.ph/) United Nations Office for Disaster Risk Reduction (UNDRR): Case studies on disaster response (https://www.undrr.org/)	

Unit Curriculum Map

Q4 Science 8 Force, Motion and Energy

TOPIC/ QUARTER	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	ASSESSMENT	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
Fourth Quarter A. ACCELERATION	Learners learn that: 1. Forces cause objects to accelerate. 2. An object is accelerating if the magnitude and/or direction of its velocity changes. 3. Kinetic energy is the energy of movement, and potential energy is stored energy. 4. As an object falls from a height its energy is conserved because its potential energy is transformed to kinetic energy. 5. The resources of the Philippines provide many benefits to its people and their activities.	The learners shall be able to demonstrate understanding of the technical meaning of acceleration and apply their understanding to everyday situations involving motion. They represent and interpret acceleration in distance-time and velocity-time graphs to make predictions about the movement of objects. Learners link motion to kinetic energy and potential energy and explain transformations between them using everyday examples. Learners relate understanding of kinetic energy and potential energy to an appreciation of the hydro-electric resources of the Philippines for the	**A.1** Identify that forces cause objects to accelerate, and that acceleration of an object is its rate of change of velocity;	**A.1** Identification	**A.1** Laboratory Activity	**A.1** Laboratory Activity Sheet https://docs.google.com/document/d/1t1et4ptdUAiOiDJ_I1LRkjekTX1uhKOv3S4Yd7DdpnE/edit?usp=sharing	**A.1** Competence/ Critical thinking
			A.2 Observe and describe examples of accelerating objects at school and in the local community, including objects that show uniform circular motion;	**A.2** Short Response	**A.2** Video Gallery	**A.2** Video Gallery Activity Sheet: https://docs.google.com/document/d/1XQByPiwsb1zosFVvSsdOYCcaPotVEtUQVdUimQGU2-o/edit?usp=sharing	**A.2** Competence/ Critical thinking
B. DISTANCE-TIME AND VELOCITY-TIME GRAPHS			**B1**. Construct and annotate distance-time graphs and velocity-time graphs to represent uniform	**B1**. Constructing and Interpreting Graphs	**B1**. Boardwork: Graphing	**B1**. https://stcuthberts.com/media/4924/graphs-activity-sheet.pdf https://www.mrsphy	**B1**. Precision

TOPIC/ QUARTER	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	ASSESSMENT	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
		generation of electricity for use in homes, communities, and industries. They use scientific investigations to explore the properties of light and apply their learning to solving problems in everyday situations. the hydroelectric power generation in the Philippines, to explain how potential energy stored in water reservoirs, i.e., man-made lakes and dams,	and non-uniform acceleration;			sics.co.uk/bge/wp-content/uploads/2022/03/velocity-time-graphs.pdf	
C. KINETIC AND POTENTIAL ENERGY			**C1**. Describe kinetic energy as the movement of objects or particles, and potential energy as energy stored due to the position of objects or particles;	**C1**. Multiple Choice	**C1**. Energy Detectives	**C1**. Pictures and Worksheets	
D. WORK AND ENERGY			**D1**. Recognize that work is done when a force causes the displacement of an object;	**D1**. Conceptual and Problem-solving Sets	**D1.1** Video Analysis and note taking **D1.2** Sample Problem solving exercises	**D1**. https://study.com/learn/lesson/video/work-as-an-integral-formula-examples.html	**D1**. Critical - thinking
			D2. Recognize that power is the rate of doing work;	**D2.** Problem Sets for Work and Power	**D2.** Problem-solving worksheets	**D2.** https://www.liveworksheets.com/Work	
			D3. Identify examples of everyday situations that demonstrate: a.	**D3**. Identification (Energy Inventory)	**D3**. Energy Transformation Detectives	**D3**. https://www.youtube.com/watch?v=-	**D3**. Critical-Thinking

TOPIC/ QUARTER	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	ASSESSMENT	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
			kinetic energy being transformed to potential energy (lifting an object, stretching a rubberband), and b. potential energy being transformed to kinetic energy (falling object, sliding down a slide);			l_xkquAgXs	
			D4. Describe the relationship between kinetic and potential energy, including the conservation of energy, in everyday situations involving gravity, such as when objects fall.	**D4**. Laboratory Report	**D4**. Laboratory Activity	**D4**. Laboratory Worksheets	
			D5. Explain that the mechanical energy of an object is the sum of the kinetic energy and the potential energy available to do work;	**D5.1**.Data Analysis Report **D5.2** Stick it Together	**D5.1** Pendulum Experiment **D5.2** Energy Transformation Stations	**D5.1** https://phet.colorado.edu/sims/html/pendulum-lab/latest/pendulum-lab_all.html **D5.2** https://phet.colorad	**D5**. Perseverance

TOPIC/ QUARTER	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	ASSESSMENT	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
						o.edu/en/simulations/energy-skate-park-basics **D5.3** henergy/ce.cfmttps://www.physicsclassroom.com/mmedia/ **D5.4** Water drop Experiment- chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.teachengineering.org/content/cub_/activities/cub_energy2/cub_energy2_lesson08_activity2_worksheet.pdf	
E. RENEWABLE ENERGY			**E1**. Investigate is converted into kinetic energy to drive turbines and generate electricity for use in homes, communities, and industries.	**E1**. CER	**E1**. Compass Points	**E1**. 'Amazing Hydro-Electric Power Collector', - https://youtu.be/x1fXAdODGvA https://www.usgs.g	**E1**. Sustainability

TOPIC/ QUARTER	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	ASSESSMENT	ACTIVITIES	RESOURCES	INSTITUTIONAL CORE VALUES
						ov/special-topics/water-science-school/science/hydroelectric-power-advantages-production-and-usage	
F. PROPERTIES OF LIGHT			**F1**. Carry out guided investigations to describe and illustrate the reflection of light using plane and curved mirrors and the refraction of light using transparent blocks, lenses, and prisms with examples from everyday applications.	**F1**. Performance Task	**F1.1** Scaffold Activity #1: **Investigating Light** **F1.2** Scaffold Activity #2: **"Where in the REAL World?"** **F1.3** Scaffold Activity #3: **Seek and Solve**	**F1.1** Worksheets **F1.2** https://www.bbc.co.uk/bitesize/guides/zxk6v9q/revision/4 **F1.3** https://www.bbc.co.uk/bitesize/guides/zxk6v9q/revision/5 **F1.4** https://www.sciencebuddies.org/blog/teach-visible-light-science	**F1**. Critical Thinking and Innovativeness