Curriculum Mapping

School Year: 2018-2019

Grade: 7 (Elementary)

Subject: General Science

Month	Periods	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
AUG.	8	LS1.8A	Life Science	INTRODUCTIO N (REVIEW)	*What are the five kingdoms? *How are living things classified? *What is a species?	*Ability to define the characteristics of living things. *Ability to classify unicellular and multicellular living things. *Classification of living things into five kingdoms. *Make slides to study various cells. *Able to relate single cells to tissues to organs to organ systems to an organism by creating an analogy using a model train.	How do living things differ? Describe one of the specialized cells and your partner has to identify it. Ex: It has no nucleus. Answer – Red Blood Cells. Discuss the difference between tissues, organs and systems. Species *Make a list of animals that show sexual dimorphism. *How to Write Lab Reports *Making Microscope Slides of Leaf Cells/Cheek Cells (www.homescience tools.com) *Crossword puzzle (www.pinterest.com/pin/1 49815125079210151) http://studyjams.scholastic.com/studyjams/jams/scien ce/animals/animal-cells.htm http://studyjams.scholastic.com/studyjams/jams/scien ce/plants/kingdoms-of-life.htm Experiment 1: cheek	*Quizzes *Class Test *Research assignments regarding top interesting facts cellular evolution from single cell organisms to multicellular organisms. *Homework: Draw a diagram of a plant and animal cells highlighting the similarities and differences between these and the reason for these differences. *Homework: Create a chart about the classification of animals according to kingdoms.

Curriculum Mapping Page 1 of 18

Curriculum Mapping

School Year: 2018-2019

Grade: 7 (Elementary)

Subject: General Science

Month	Periods	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
							cells Vs. Onion cell Hands on activity 1: make a model cell	
		ESS.2.8B	EARTH	MINERALS	*What are minerals? *What are minerals composed of? *How are minerals extracted and used? *How are minerals classified? *What are the properties of minerals?	*Examine whether the chemical composition of the mineral changes? *Discuss about the impurities in minerals? *Discuss about mineral extraction and its consequences. Examine what metals are obtained from mineral. *Differentiate Silicates from Non-silicates. *Discuss about the Mohs scale of hardness. *Elaborate different properties of minerals. *Explain the importance of mineral extraction. *Classify minerals by using mineral identification key. *Analyzing photos of some mineral stones to identify its composition and impurities.	What are minerals? Looking at some photos and tabulate whether they are minerals or not by identifying the properties of minerals. What are minerals composed of? Research varieties of quartz. What colors are they? (amethyst, jasper, citrine, creolite, rose quartz, rock crystal) How are minerals extracted and used? Create a poster about the advantages and disadvantages of mineral extraction. How are minerals classified? Summarize the information on silicates on a chart. What are the properties of minerals? Using the Moh's Scale of Hardness, describe some minerals.	*Class Performance *Quizzes *Hand outs *Homework: Research Assignment: You can't scratch quartz with a nail. Can quartz scratch the nail? *3-2-1 count down *Strategic questioning *Think Pair share *Round Robin charts * Modified Worksheets *Video Analysis *Group Presentations (Posters, PPT, Video, etc) *Collaborative Discussions *Case- Analysis/Problem Solving *Graphic Organizers *Pop-Quizzes *Research Paper *Question-Answering (check the last page of

Curriculum Mapping Page 2 of 18

Curriculum Mapping

School Year: 2018-2019

Grade: 7 (Elementary)

Subject: General Science

Month	Periods	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
							*Use a table to display results of classification of substances whether they contain mineral properties. *Photo description of some mineral stones to identify its composition and impurities. *Create a chart about common silicates which make up many rocks. *Mineral Exhibit: Preparing a file card for each mineral. *Make a bar chart on the most abundant element on the earth's crust. *look for information on minerals on Internet. Classify more minerals by color, luster and hardness.http://studyjams. scholastic.com/studyjams/j ams/science/rocks-minerals-landforms/minerals.htm > Experiment 2: ROCK INVSTAIGATION > HANDS ON ACTIVITY 2: IDENTIFYING MINERALS	each Unit/Chapter) *Experiments (Pre-/Post-discussions) *Creative extension project *Pre-/Post-Test *Mid-/Final Term Exams

Curriculum Mapping Page **3** of **18**

Curriculum Mapping

Grade: 7 (Elementary)

Subject: General Science

Month	Periods	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
SEPT.	8	LS2.8A	Life Science	THE SIMPLEST LIVING THINGS (REVIEW)	*What is the Protoctist Kingdom? *What are viruses and infectious diseases? *How can we fight infectious diseases? *Are all microorganis ms harmful?	*Identification of the main characteristics of microorganisms *Examine the structure and vital functions of bacteria. *Ability to visualize and diagrammatically interpret structure of viruses. *Analyze and evaluate three arguments used in information about food poisoning. *Simulate the spread of an infectious disease. *Describe some factors essential in the prevention of an infectious disease. *Identify health challenges and solution in various case studies. *Apply their understanding of the spread of the disease and prevention methods to health problems relevant to themselves or their communities.	Monera Kingdom *Draw a bacteria cell and clearly label each part. *Compare the various types of bacteria using a chart – Parasites, Saprophytes, Symbionts. Protoctist Kingdom *In groups, compare protoctists and monera. *Describe how each group of protozoa move. *Compare algae and plants *Using a Venn diagram, compare protozoa and algae. Viruses *Draw and label a virus. *Discuss with your partner -Which vital function do viruses share with other living things. Infectious diseases *Choose five infectious diseases and complete the table. Information should include – Illness, microorganism, transmitted through and symptoms *Discuss the benefits and	*Quizzes *Class Test *Homework: Experimentation – Put moist bread in a plastic box. Observe the changes after a few days. Record your findings and provide reasons for this change. *Homework: Research about Food Poisoning. Vocabulary Building Exercises related to Infectious Disease (https://apps.nlm.nih. gov/pdfs) *3-2-1 count down *Strategic questioning *Think Pair share *Round Robin charts * Modified Worksheets *Video Analysis *Group Presentations (Posters, PPT, Video, etc) *Collaborative Discussions *Case-

Curriculum Mapping

Curriculum Mapping

School Year: 2018-2019

Grade: 7 (Elementary)

Subject: General Science

Month	Periods	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
							differences between vaccines and antibiotics. *Debate about food poisoning. *Revise the structure of an animal cell and the microorganisms that can cause disease. (www.nuffieldfoundation.org) *Liquid Exchange Activity that models a spread of an infectious disease. (https://apps.nlm.nih.gov/pdfs)	Analysis/Problem Solving *Graphic Organizers *Pop-Quizzes *Research Paper *Question-Answering (check the last page of each Unit/Chapter) *Experiments (Pre- /Post-discussions) *Creative extension project *Pre-/Post-Test *Mid-/Final Term Exams
		ESS.2.8B	EARTH SCIENCE	ROCKS	*How are rocks used? *What are rocks? *What are sedimentary rocks? *How are sedimentary rocks formed? *How are igneous rocks formed? *How are	* Examine the difference between minerals and rocks. *Discuss about monomineralic rock. *Ability to explain how fossils are formed. *Differentiate between compaction and cementation *Differentiate igneous, sedimentary and metamorphic rocks. *Investigating weathering and sedimentation.	How are rocks are used? Make a list of the uses of rocks. Oil has more uses than most other rocks. Investigate "products made from oil" on the internet. What are rocks? Create a model showing the composition or layers of the Earth. What are sedimentary rocks?	*Class Performance *Quizzes *Hand outs *Research Assignment: Where can you find examples of rock erosion in your country? Choose an example and say what natural phenomena caused the erosion. *3-2-1 count down *Strategic questioning *Think Pair share

Curriculum Mapping Page **5** of **18**

Curriculum Mapping

School Year: 2018-2019

Grade: 7 (Elementary)

Subject: General Science

Curriculum Mapping Page 6 of 18

Curriculum Mapping

Grade: 7 (Elementary)

Subject: General Science

Month	Periods	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
							outside. You have information on two different signs: one made of limestone and one made of granite. Which one is better? Select the best sign, and write a report. Give reasons for your selection. How are metamorphic rocks formed? • Do igneous rocks or metamorphic rocks contain fossils? Why or why not? • Draw pictures of sedimentary, igneous and metamorphic rocks. Write the name on the back. Distribute the pictures. Say if your rock is sedimentary, igneous or metamorphic. What is the rock cycle? • Copy and label the stages of the rock cycle.	

Curriculum Mapping

Grade: 7 (Elementary)

Subject: General Science

Month	Periods	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
							*Create a model showing	
							the composition or layers	
							of the Earth.	
							*Activity:	
							Describe a rock from the	
							table.	
							Observe samples of	
							sandstone and clay under a	
							magnifying glass.	
							*Make a chart about	
							formation of rocks.	
							* Make a series of drawings	
							to show the process of	
							fossils formation.	
							*Summarize the	
							information about coal and	
							oil.	
							*Research: What is the	
							difference between magma	
							and lava?	
							*In which type of rocks can	
							you minerals more clearly?	
							Why?	
							*Do igneous and	
							metamorphic rocks contain	
							fossils? Why or Why not?	
							* Collect rock sample from	
							you area and classify them	
							as sedimentary, igneous	
							and metamorphic rock.	
							*Copy and label the stages	
							of rock cycle	
							Make a project report on	
							how many active volcanoes	
							are there on earth.	

Curriculum Mapping

School Year: 2018-2019

Grade: 7 (Elementary)

Subject: General Science

Month Pe	eriods	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
							http://studyjams.scholastic. com/studyjams/jams/scien ce/rocks-minerals- landforms/rock-cycle.htm http://studyjams.scholastic. com/studyjams/jams/scien ce/rocks-minerals- landforms/igneous- rocks.htm http://studyjams.scholastic. com/studyjams/jams/scien ce/rocks-minerals- landforms/sedimentary- rocks.htm http://studyjams.scholastic. com/studyjams/jams/scien ce/rocks-minerals- landforms/metamorphic- rocks.htm > Experiment 3: Weathering and sedimentation > Experiment 4: Volcano Science > Hands on activity3 : Compaction and Sedimentation > Hands on activity4 : Making Rock cycle	

Curriculum Mapping Page **9** of **18**

Curriculum Mapping

School Year: 2018-2019

Grade: 7 (Elementary)

Subject: General Science

Month	Periods	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
ост	12	LS.1.4A LS.1.4.B LS.1.8B	Life Science	INVERTEBRAT ES	*What makes up the Animal Kingdom? *How certain	*To be able to interpret and recognize the main characteristics of invertebrates. *Classification of invertebrates into	What makes up the animal Kingdom? *What part of a sponge body does the name porifera refer to? *Copy and label the	*Quizzes *Class Test *Homework: Complete the charts made in class and also
NOV					*How certain worms differ? *What are molluscs? *What are arthropods? *What are echinoderms?	invertebrates into groups. *Describe the invertebrate life functions. *Differentiate between bilateral and radial symmetry. *Compare and Contrast two or three different invertebrates in a Venn Diagram. *Evaluate the graphic organizer for studying vertebrates and invertebrates.	*Copy and label the drawing of the sponge. Use arrows to label the flow of water. Show the entry and exit points. *Discuss the differences between cnidarian and profera. How do these worms differ? *Create a chart depicting the main characteristics, habitat and an example of Nematodes, Platyhelminthes and Annelids. * Discuss about the larger segments called clitellum of earth warm What are Molluscs, Anthropods and Echinoderms? *Create a similar table for Molluscs, Anthropods and Echinoderms, as mentioned above. *Discuss the difference	include a diagram of the examples mentioned. This will be used to assist the student for various pop quizzes. *Enhance Vocabulary Words Related to the topic. *3-2-1 count down *Strategic questioning *Think Pair share *Round Robin charts * Modified Worksheets *Video Analysis *Group Presentations (Posters, PPT, Video, etc) *Collaborative Discussions *Case- Analysis/Problem Solving *Graphic Organizers *Pop-Quizzes *Research Paper *Question-Answering

Curriculum Mapping Page **10** of **18**

Curriculum Mapping

Grade: 7 (Elementary)

Subject: General Science

Month	Periods	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
							between radial and bilateral symmetry. *Make a poster of Garden snail and label it. *Diagrammatical representation of metamorphosis of a monarch butterfly. *Discuss about the feeding habits of spider. *Create a food web for an invertebrate and explain how environmental changes affect it. (http://animals.nationalgeo graphic.com/animals) *Use a dichotomous key to identify invertebrates. (http://www.usc.edu/org/s eagrant/Education/IELesso ns/Docs/CrittersClassified Online)http://studyjams.sc holastic.com/studyjams/jams/science/animals/inverte brates.htm	(check the last page of each Unit/Chapter) *Experiments (Pre-/Post-discussions) *Creative extension project *Pre-/Post-Test *Mid-/Final Term Exams
NOV DEC	12	LS.1.4A LS.1.4.B LS.1.8B	Life Science	VERTEBRATES	*What characteristic s do vertebrates have?	*Learn the basic characteristics of animals *Comparison of vertebrates and	Mammals, Birds, Reptiles, Amphibians *Create a large chart showing the physical characteristics, nutrition,	*Quizzes *Class Test <u>*Homework:</u> Create a chart showing the similarities and

Curriculum Mapping

Curriculum Mapping

School Year: 2018-2019

Grade: 7 (Elementary)

Subject: General Science

Month	Periods	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
					*What are mammals like? *What are birds like? *What are reptiles like? *What are amphibians like? *What are fish like?	invertebrates. *Compare and Contrast two or three different invertebrates in a Venn Diagram. *Evaluate the graphic organizer for studying vertebrates and invertebrates.	respiration and reproduction of each of the aforementioned vertebrates. *Vertebrate and Invertebrate Animal Flip Book *Activity Worksheet identifying vertebrates and invertebrates. *Create graphic organizer for studying vertebrates and invertebrates and invertebrates (WWW.pinterest.com; education.com) http://studyjams.scholastic.com/studyjams/jams/science/animals/vertebrates.htm	differences between vertebrates and invertebrates. Mention the results (advantages/disadvant ages) of these differences. Use the charts made in class on vertebrates and invertebrates. (www.hmns.org/wp-content/uploads/2015/06/WOW_Vertebrates_Middle_School.pdf)
JANUARY	8	ESS.3.8C ESS.6.8A ESS.7.8A	EARTH SCIENCE	THE EARTH'S ATMOSPHERE	*What do we know about the atmosphere? *What makes up the weather? What factors affect climate? *What is meteorology	*Examining the origin and composition of the atmosphere. *Learning to describe the state of atmospheric conditions. *Discover how living thing affect the composition of the atmosphere. *Analyze how wind,	What do we know about the atmosphere? • Create a poster showing the importance of oxygen in the atmosphere suitable for life. What makes up the weather? • Interpreting weather maps by	*Performance in class *Quizzes *Homework *Research Assignment: One Week Weather Forecasting *3-2-1 count down *Strategic questioning *Think Pair share *Round Robin charts * Modified

Curriculum Mapping Page 12 of 18

Curriculum Mapping

School Year: 2018-2019

Grade: 7 (Elementary)

Subject: General Science

Month	Periods	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
					? *How do humans impact on the atmosphere? *What is green house effect?	clouds and precipitation are formed. *Study the effect of living things on atmosphere and climate *Discuss about the meteorological instrument.	identifying isobars. What factors affect climate? • Look at the factors that affect climate. Can you define how these affect the climate in your part of the country? What is meteorology? • Which instruments are needed to collect the information about wind speed and rain. How do humans impact on the atmosphere? • Represent in tabular form how human activities that pollute the atmosphere. Investigate: Ozone is very scarce, but very important. Explain why it is important. Tell how it can be beneficial or harmful *Exercises and Videos on: Layers of the atmosphere Components of air Weather and Isobar contour maps	Worksheets *Video Analysis *Group Presentations (Posters, PPT, Video, etc) *Collaborative Discussions *Case- Analysis/Problem Solving *Graphic Organizers *Pop-Quizzes *Research Paper *Question-Answering (check the last page of each Unit/Chapter) *Experiments (Pre- /Post-discussions) *Creative extension project *Pre-/Post-Test *Mid-/Final Term Exams

Curriculum Mapping Page **13** of **18**

Curriculum Mapping

Grade: 7 (Elementary)

Subject: General Science

Month	Periods	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
							Make a chart on meteorological instrument and its uses Project: ✓ Weather Maps ✓ Greenhouse ✓ Anemometer. Investigate: ✓ Ozone layer ✓ Atmospheric Pressure at the Poles and Equator. ✓ Factors that affect climates. ✓ Relation between weather condition and types of clouds. ✓ How cloudy is it when the air pressure is lowest/highest? ✓ What kind of wind is associated with rain?	
							 Experiment 5 : balloon magic with baking soda Hands on activity 5: Making of anemometer 	

Curriculum Mapping

School Year: 2018-2019

Grade: 7 (Elementary)

Subject: General Science

Month	Periods	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
							Does air have weight? hands Hands on Activity 7: Air pressure with tissue paper Air pressure with glass and card board Air pressure with balloon and bottle.	
FEBRUARY & MARCH	10	ESS.7.8C ESS.6.8A ESS.5.8A	EARTH SCIENCE	THE HYDROSPHER E	*Where is the water on earth? *What are the properties of water? *What are the properties of sea water? *Where is fresh water found? *What is the water cycle? *What is water used for? *What pollutes water?	*Learn about water distribution. *Ability to classify ocean movement. *Describe the water cycle. *Identify uses of water and causes of water pollution.	Where is there water on Earth? Represent the pie chart information in two bar graphs. What are the properties of sea water? Look up the following terms: solvent, evaporation, cohesion, anomalous dilation and adhesion Where is fresh water found? Create a power point presentation about bodies of fresh water you can find in Vietnam. What is water used for? Make a poster which will show	*Class Performance *Quizzes *Hand outs *Homework: Draw a frozen lake showing living things that exist under the ice. *3-2-1 count down *Strategic questioning *Think Pair share *Round Robin charts * Modified Worksheets *Video Analysis *Group Presentations (Posters, PPT, Video, etc) *Collaborative Discussions *Case-

Curriculum Mapping Page **15** of **18**

Curriculum Mapping

School Year: 2018-2019

Grade: 7 (Elementary)

Subject: General Science

Month	Periods	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
					*Nitrogen Cycle		how to prevent water pollution. • Create a slogan that may raise awareness on the prevention of water pollution. > Experiment 6; Effect of temperature to Condition > Hands on Activity 8: make a mini water cycle	Analysis/Problem Solving *Graphic Organizers *Pop-Quizzes *Research Paper *Question-Answering (check the last page of each Unit/Chapter) *Experiments (Pre- /Post-discussions) *Creative extension project *Pre-/Post-Test *Mid-/Final Term Exams
APRIL	4	P.S.6.4A	PHYSICAL SCIENCE	FORCE	*Define force. *What is the difference between constant force and force at a distance? *What is tension and compression and what are the effects? *How force change the speed and	*Distinguish between the types of forces. *Ability to visualize and diagrammatically interpret the effect of tension and compression. *Analyze the effect of force in speed and direction.	*Project: Force and motion (www.all-science-fair- projects.com) *Video: (www.phet.colorado.edu) *Discuss with a partner how bounciness of a golf ball affect the distance it will travel. *Explain Newton's third law of motion using a balloon powered rocket car. (https://www.pinterest.co m/explore/newtons- laws/?lp=true)	*Class Performance *Quizzes *Hand outs *Homework: Discuss Newton's Laws of Motion. *3-2-1 count down *Strategic questioning *Think Pair share *Round Robin charts * Modified Worksheets *Video Analysis *Group Presentations (Posters, PPT, Video, etc) *Collaborative

Curriculum Mapping Page **16** of **18**

Curriculum Mapping

School Year: 2018-2019

Grade: 7 (Elementary)

Subject: General Science

Month	Periods	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
					direction of the moving object?		Experiment 7: Newton third law of Motion	Discussions *Case- Analysis/Problem Solving *Graphic Organizers *Pop-Quizzes *Research Paper *Question-Answering (check the last page of each Unit/Chapter) *Experiments (Pre- /Post-discussions) *Creative extension project *Pre-/Post-Test *Mid-/Final Term Exams
MAY	8	P.S.6.8A	PHYSICAL SCIENCE	SLOWING THINGS DOWN	*What is friction? *What is Newton's first law of motion? *What is the effect of lubricant on motion of the object? *What is streamlining ?	*Ability to define friction. *Correlate friction and air resistance to first law of motion. *Discuss thereal life application of friction and air resistance. *Analyze the effect of air resistance by using different model of shapes.	Videos on ✓ Bicycle Brakes, using Friction ✓ Smooth and Rough Surfaces, using ✓ Friction ✓ What is the effect of air resistance on different model of shapes Experiment 8: Sticky Rice Experiment 9: Ultimate paper Glider	*Class Performance *Quizzes *Hand outs *Homework: Research Assignment about the application of Newton's First Law of Motion. *3-2-1 count down *Strategic questioning *Think Pair share *Round Robin charts * Modified Worksheets *Video Analysis

Curriculum Mapping Page 17 of 18

Curriculum Mapping

Grade: 7 (Elementary)

Subject: General Science

Core **Activities** Month Periods Topic **Skills Strand** Content **Assessments Standard** *Group Presentations Experiment 10; sink or float (Posters, PPT, Video, etc...) *Collaborative Discussions *Case-Analysis/Problem Solving *Graphic Organizers *Pop-Quizzes *Research Paper *Question-Answering (check the last page of each Unit/Chapter) *Experiments (Pre-/Post-discussions) *Creative extension project *Pre-/Post-Test *Mid-/Final Term Exams

School Year: 2018-2019

Curriculum Mapping Page 18 of 18