

CURRICULUM MAP

Subject: SCIENCE

Grade: 4TH

Quarter: 3RD

Teacher(s): 4th Grade

Month _____	WEEK 1-2 _____	WEEK 3-4 _____	WEEK 5-6 _____	WEEK 6-7 _____	WEEK 8-9 _____
<p>GDOE Standards/</p> <p>Concept (CCSS Standards)</p>	<p>4.1.1 Observe that results of repeated scientific investigations are seldom exactly the same. When differences occur, propose an explanation for them using recorded information from the investigations.</p> <p>4.1.2 Form and support a hypothesis after collecting information by gathering specimens or observing an experiment</p>	<p>4.1.3. Differentiate between evidence gathered through observations and inferences, and use the evidence to develop a line of reasoning.</p> <p>4.4.1 Describe how the location of a place affects its weather and atmospheric conditions. EXAMPLE(S): How does Guam’s location affect its weather and atmospheric conditions?</p>	<p>4.4.2 Describe how an environment can be changed by typhoons, earthquakes, volcanoes, waves, currents, and floods. EXAMPLE(S): Illustrate how Guam’s environment has been shaped and changed by earthquakes, volcanoes, typhoons, waves, currents, and floods.</p> <p>4.4.3 Describe how islands and reefs are formed and what forces could change them.</p>	<p>4.4.4 Investigate and explain that air is a substance that surrounds us that takes up space and whose movements we feel as wind.</p> <p>4.4.5 Predict how changes on the Earth’s surface will affect local and world ecosystems.</p>	<p>4.4.6 List and define geological concepts in the formation of rocks. EXAMPLE(S): igneous, conglomerates, sedimentary</p> <p>4.5.2 Explain why some products and materials are easier to recycle than others.</p>
<p>Vocabulary:</p> <p>Big Idea:</p>	<p>Key Vocabulary: water cycle, evaporation, groundwater, precipitation, hurricane, typhoon, tornado, blizzard, humidity, front, meteorologist, barometer, wind vane, tropical depression, tropical storm, storm surge, vortex, landforms, weather, atmosphere, sedimentary rock, igneous rock, metamorphic rock, geology, geological</p> <p>Big Idea 1, Quarter 3</p> <p>Students will explain natural processes and events that shaped and continue to shape the earth.</p>	<p>Key Vocabulary: water cycle, evaporation, groundwater, precipitation, hurricane, typhoon, tornado, blizzard, humidity, front, meteorologist, barometer, wind vane, tropical depression, tropical storm, storm surge, vortex, landforms, weather, atmosphere, sedimentary rock, igneous rock, metamorphic rock, geology, geological</p> <p>Big Idea 1, Quarter 3</p> <p>Students will explain natural processes and events that shaped and continue to shape the earth.</p>	<p>Key Vocabulary: water cycle, evaporation, groundwater, precipitation, hurricane, typhoon, tornado, blizzard, humidity, front, meteorologist, barometer, wind vane, tropical depression, tropical storm, storm surge, vortex, landforms, weather, atmosphere, sedimentary rock, igneous rock, metamorphic rock, geology, geological</p> <p>Big Idea 1, Quarter 3</p> <p>Students will explain natural processes and events that shaped and continue to shape the earth.</p>	<p>Key Vocabulary: water cycle, evaporation, groundwater, precipitation, hurricane, typhoon, tornado, blizzard, humidity, front, meteorologist, barometer, wind vane, tropical depression, tropical storm, storm surge, vortex, landforms, weather, atmosphere, sedimentary rock, igneous rock, metamorphic rock, geology, geological</p> <p>Big Idea 1, Quarter 3</p> <p>Students will explain natural processes and events that shaped and continue to shape the earth.</p>	

<p>Assessment</p> <p>Resources:</p>	<p>Resources & Links to Technology</p> <p>Harcourt Grade 4, pp. x–xxiv</p> <p>Nature of Science Game</p> <p>Bill Nye Episodes (Go to rocks and soil under earth science)</p>	<p>Resources & Links to Technology</p> <p>Harcourt Grade 4, pp. x–xxiv</p> <p>Nature of Science Game</p> <p>Bill Nye Episodes (Go to rocks and soil under earth science)</p>	<p>Resources & Links to Technology</p> <p>Harcourt Grade 4, pp. x–xxiv</p> <p>Nature of Science Game</p> <p>Bill Nye Episodes (Go to rocks and soil under earth science)</p>	<p>Resources & Links to Technology</p> <p>Harcourt Grade 4, pp. x–xxiv</p> <p>Nature of Science Game</p> <p>Bill Nye Episodes (Go to rocks and soil under earth science)</p> <p>Chapter 2: B48 Harcourt Science</p> <p>Protecting Ecosystems</p> <p>Lesson 1: B50</p> <p>Lesson 2: B58</p> <p>Lesson 3: B66</p>	<p>Resources & Links to Technology</p> <p>Harcourt Grade 4, pp. x–xxiv</p> <p>Nature of Science Game</p> <p>Bill Nye Episodes (Go to rocks and soil under earth science)</p>
<p>ESSENTIAL QUESTIONS</p>	<p>Essential Question(s):</p> <p>How do the location and landforms of Guam affect the weather and seasons? How is this different than other areas on the earth? In what ways is the Earth always changing? How do we know?</p> <p>How can atmospheric patterns be used to make predictions about the weather?</p>	<p>Essential Question(s):</p> <p>How do the location and landforms of Guam affect the weather and seasons? How is this different than other areas on the earth? In what ways is the Earth always changing? How do we know?</p> <p>How can atmospheric patterns be used to make predictions about the weather?</p>	<p>Essential Question(s):</p> <p>How do the location and landforms of Guam affect the weather and seasons? How is this different than other areas on the earth? In what ways is the Earth always changing? How do we know?</p> <p>How can atmospheric patterns be used to make predictions about the weather?</p>	<p>Essential Question(s):</p> <p>How do the location and landforms of Guam affect the weather and seasons? How is this different than other areas on the earth? In what ways is the Earth always changing? How do we know?</p> <p>How can atmospheric patterns be used to make predictions about the weather?</p>	<p>Essential Question(s):</p> <p>How do the location and landforms of Guam affect the weather and seasons? How is this different than other areas on the earth? In what ways is the Earth always changing? How do we know?</p> <p>How can atmospheric patterns be used to make predictions about the weather?</p>

Month	WEEK 6	WEEK 7	CCSS ELA Support Standards:	Instructional Strategies (District)	Instructional Strategies (District)
<p>Concept (CCSS Standards)</p>	<p>4.4.1 Observe that results of repeated scientific investigations are seldom exactly the same. When differences occur, propose an explanation for them using recorded information from the investigations.</p> <p>4.1.2 Form and support a hypothesis after collecting information by gathering specimens or observing an experiment.</p>	<p>4.1.3 Differentiate between evidence gathered through observations and inferences, and use the evidence to develop a line of reasoning.</p> <p>4.5.1 Describe how the use of technology has changed the way people live on Guam and around the world.</p>	<p>CCSS ELA Support Standards</p> <p>Students will read about the weather and how it can be affected by landforms. They can take the information and apply it to Guam. As they read, students will take notes and summarize information to use when they are writing about their findings. Students will share their findings in their science journals, reports, and projects.</p> <p><i>NEW PRIORITIZE STANDARDS</i></p> <p>4.4.1 NON NEGOTIABLE</p> <p>4.4.2</p> <p>4.4.3</p> <p>4.4.5</p> <p>4.4.6</p>	<p>Instructional Strategies (EL, SIOP, SPED, Marzano)</p> <p>Have students experience the effects of weather using various simulations. Here is one example that utilizes 12 stations for students to rotate through as they work in small groups: Weather and Erosion (Marzano: Cooperative learning and generating and testing hypothesis)</p> <p>Students can create a book with the various landforms they encounter in Guam. They can use pictures to demonstrate how these landforms influence the weather. You can use this video to support students as they learn about the various landforms that exist on the island.</p> <p>Students can participate in a lab to better understand air masses and fronts. In order to understand the differences in rocks, have students experience the rock cycle using this Sugar-Rock Cycle Lab, Modelling the Rock Cycle, and Crayon Rock Cycle Lab. Students will compare and/or contrast the landforms and effects they have on the weather using an interactive Venn diagram (Marzano: Identifying similarities and differences)</p> <p>In term of topographical maps, students are most likely seeing these for the first time. You might find that having students create a topographical map is the easiest way for them to learn how to read other maps.</p>	<p>Instructional Strategies (EL, SIOP, SPED, Ma)</p> <p>When students answer questions, you should elaborate on their answers to get them to focus and/or think at a higher level. When they write or draw in their journals or use any other method that demonstrates their understanding, it is important to give students remarks about their thinking and understanding of the concepts. Make comments to explicitly explain concepts and/or ask more questions for clarification, encourage higher- level thinking, and help students understand any misconceptions they may have obtained (Marzano: Providing Feedback)</p> <p>This is a time to obtain information from students about their thinking and understanding. Cues and questions are meant as a way to gain this knowledge and help direct students (Marzanos: Cues, questions, and graphic organizers)</p> <p>Students can use pictures of the various technologies and create a timeline showing how technology has changed over the years and built upon each other (Marzano: Nonlinguistic representations)</p> <p>Students will determine how technologies are the same and different. They will be able to show that many technologies had a relationship with previous technology; i.e. without an old technology, the new technology would not have come about so quickly or at all (Marzano: identifying</p>

				<p>might find that having students create a topographical map is the easiest way for them to learn how to read other maps.</p> <p>This is a time to obtain information from students about their thinking and understanding. Cues and questions are meant as a way to gain this knowledge and help direct students. Some questions may be: “Why did you select that question/hypothesis?” “Why did you decide to conduct the experiment in this way?” “What is your prediction of what will occur and why?” “Did your data support your hypothesis?” “If not, why do you think your hypothesis and data do not support each other?” Make certain students are able to support their answers with information from their activity (Marzano: Cues, Questions and advance organizers)</p>	similarities and differences)
<p>Vocabulary:</p> <p>Big Idea:</p>	<p>Key Vocabulary: question, hypothesis, data, collect, analyze, conclusion, prediction, investigation, experiment, support, observation, inference, inquiry, technology, impact</p> <p>Big Idea 1, Quarter 4</p> <p>Students will compare and contrast how the use of technology has changed human behavior over time.</p>	<p>Key Vocabulary: question, hypothesis, data, collect, analyze, conclusion, prediction, investigation, experiment, support, observation, inference, inquiry, technology, impact</p> <p>Big Idea 1, Quarter 4</p> <p>Students will compare and contrast how the use of technology has changed human behavior over time</p>			
<p>Assessment /Resources</p>	<p>Resources & Links to Technology</p> <p>Harcourt Grade 4, pp. x–xxiv</p> <p>Inventions</p> <p>History of Lighting</p>	<p>Resources & Links to Technology</p> <p>Harcourt Grade 4, pp. x–xxiv</p> <p>Inventions</p> <p>History of Lighting</p>			

ESSENTIAL QUESTIONS	Essential Question(s): How do the various levels of technological development affect different cultures? How does technology impact our lives? How will technology change our future lives?	Essential Question(s): How do the various levels of technological development affect different cultures? How does technology impact our lives? How will technology change our future lives?			
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