

Subject: Solar Eclipse S.T.E.A.M. Unit		8-21-17		Name: Evans, Boyd, Khan	
	Reading	Language Arts	Math	Science	Parent Involvement
Standards Addressed this week	<p>CCSS.ELA-LITERACY.RL.4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.</p> <p>CCSS.ELA-LITERACY.RL.4.2 Determine a theme of a story, drama, or poem from details in the text; summarize the text.</p> <p>CCSS.ELA-LITERACY.RL.4.3 Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).</p> <p><u>CCSS.ELA-LITERACY.W.4.3</u> Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.</p> <p><u>CCSS.ELA-LITERACY.W.4.3.A</u> Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.</p> <p><u>CCSS.ELA-LITERACY.W.4.3.B</u> Use dialogue and description to develop experiences and events or show the responses of characters to situations.</p> <p><u>CCSS.ELA-LITERACY.W.4.3.C</u> Use a variety of transitional words and phrases to manage the sequence of events.</p> <p><u>CCSS.ELA-LITERACY.W.4.3.D</u> Use concrete words and phrases and sensory details to convey experiences and events precisely.</p> <p><u>CCSS.ELA-LITERACY.W.4.3.E</u> Provide a conclusion that follows from the narrated experiences or events. Use concrete words and phrases and sensory details to convey experiences and events precisely.</p> <p><u>CCSS.ELA-LITERACY.W.4.3.E</u> Provide a conclusion that follows from the narrated experiences or events.</p> <p>S4E1. Obtain, evaluate, and communicate information to compare and contrast the physical attributes of stars and planets. a. Ask questions to compare and contrast technological advances that have changed the amount and type of information on distant objects in the sky. b. Construct an argument on why some stars (including the Earth's sun) appear to be larger or brighter than others. (Clarification statement: Differences are limited to distance and size, not age or stage of evolution.) c. Construct an explanation of the differences between stars and planets. d. Evaluate strengths and limitations of models of our solar system in describing relative size, order, appearance and composition of planets and the sun. (Clarification statement: Composition of planets is limited to rocky vs. gaseous.) S4E2. Obtain, evaluate, and communicate information to model the effects of the position and motion of the Earth and the moon in relation to the sun as observed from the Earth. a. Develop a model to support an explanation of why the length of day and night change throughout the year. b. Develop a model</p>				
	Essential	How were folktales and legends used to give	How do you use folktales and legends to influence	How do you find the circumference of a circle or	What is a solar eclipse?

Question	meaning to events like a solar eclipse?	creative writing?	a sphere?		
Objectives	<p>http://www.firstpeople.us/FP-HTML-Legends/EclipseOfTheSunBlamedOnBlackSquirrel-Choctaw.html</p> <p>Mini Lesson: Teacher will read a Choctaw folktale about a solar eclipse. The class will have a discussion about how the folktales gave meaning to scientific events, such as the solar eclipse, in a time when the people did not have scientific background knowledge.</p> <p>Whole Group: Teacher will conduct a discussion about story elements previously covered, i.e. main idea, theme, plot, characters, setting, etc.</p>	<p>Mini Lesson: Teacher will use a Choctaw folktale (read and discussed during reading) about a solar eclipse. The class will have a discussion about how the folktales gave meaning to scientific events, such as the solar eclipse, in a time when the people did not have scientific background knowledge.</p> <p>Individual Work: Students will do a creative writing entitled “The Day the Sun Went Black” about what would happen if they did not know anything about a solar eclipse. Students will write these journals in the Seesaw App.</p> <p>Teacher will provide a checklist for students to use</p>	<p>Mini Lesson: Teacher will lead a discussion about how to find the circumference of a sphere using either $C=d\pi$ or $C=2\pi r$.</p> <p>Using the radius of the sun, Earth, and the moon, the students will find the circumference of each object.</p> <p>Individual Work: Students will make clay models of the eclipse using the information they now know about the celestial bodies.</p> <p>Closing: Students will explain what the circumference of a sphere or circle is and accurately tell how to find that measurement using the provided formulas.</p>	<p>Mini Lesson: Teacher will lead a discussion about solar eclipses using http://mashable.com/2017/08/16/solar-eclipse-mixed-reality-simulation-weather-channel/#i8CUXp_t7iqP as a hook.</p> <p>Individual Work: Students will use their iPads to complete a Webquest about the Solar Eclipse.</p> <p>http://bit.ly/SolarEclipseWQ</p> <p>If students are finished with their webquest, they will watch the NASA live feed of the Path of Totality via https://www.nasa.gov/eclipselive/#NASA+TV+Public+Channel</p> <p>Closing: Students will</p>	<p>(Evans)</p> <p>A parent volunteer brought materials to make solar eclipses and rocket ships out of food!</p>

	Closing: Students will review the purposes of legends and folktales and how it relates to the solar eclipse.	during the writing time. Closing: Teacher will go over the checklist. Students will self-assess progress.		review eye safety and watch the eclipse!	
Pacing	Mini Lesson: 10 minutes Individual Work: 25 minutes Closing: 5 minutes	Mini Lesson: 10 minutes Individual Work: 25 minutes Closing: 5 minutes	Mini Lesson: 10 minutes Individual Work: 30-40 minutes Closing: 5 minutes	Mini Lesson: 10 minutes Individual Work: 30-40 minutes Closing: 5 minutes	

Instructional Strategies	Differentiation	Technology	Assessments
Independent work, group work, peer editing, rubrics/checklists, oral discussion, hands on activities, research, community involvement	Group work, independent work, peer editing, leveled solar eclipse passages	SMART Board, projector, iPads, Seesaw App, http://www.firstpeople.us/FP-HTML-Legends/EclipseOfTheSunBlamedOnBlackSquirrel-Choctaw.html http://bit.ly/SolarEclipseWQ https://www.nasa.gov/eclipselive/#NASA+TV+Public+Channel	Narrative Writing Rubric, Self-Assessment Checklist, Oral discussion, webquest, teacher observation