Timeline ->	*Quarter Three (lessons)*
Guiding Questions	***Science:*** How can we describe the objects in the day and night sky? How can we describe the similarities and differences between objects in the day and night skies? ***Language Arts:*** How can we relate the terms beginning, middle and end to help write about the sun's path during a day or the moon's shape during a month? How can we use non-fiction text to build our vocabulary word wall? How can we use our science notebook to write about our observations, our learning, our class data and new vocabulary? How can we use new science terms to describe objects we see in the day and night skies? ***Math:*** How is a bar graph drawn to show totals with collected data from a tally table? What conclusions can we draw from the data portrayed by the different tally tables we make? How can we use different measuring tools (rain gauge/anemometer) and measuring units (day, night, week, time)? **Social Studies:** How can we use our examples from weather and the moon to show how things change over time? How do we use maps and globes to find locations (cardinal directions) to identify physical characteristics OF THE SUN rising in the east and setting in the west? ***Art/Physical Education:*** How can we draw/illustrate and label sketches for a science notebook? How can we create 3-D models that show what we have learned about how the earth's rotation causes day and night? How can we use drama and movement to demonstrate our understanding of celestial objects movementin the sky?
General Learner Outcomes	***GLO#1: Self-Directed Learner:*** Students will follow directions to complete the class and homework tasks. ***GLO#2: Community Contributor:*** Students will share their math, science and literacy products with other members of their class or another classroom. ***GLO#3: Complex Thinker:*** Students will use their problem solving, math and writing skills to investigate the

	similarities and differences between celestial objects in the day and night sky. ***GLO#4: Quality Producer:*** Students will create several products (poster/model/graphs/data tables) that illustrate their understanding about ***GLO#5: Effective Communicator:*** Students will listen, discuss and record information from their different lessons through oral, written and math pieces that illustrate concepts they have learned. Students will orally share their products with other students. ***GLO#6: Effective and Ethical User of Technology:*** Students will utilize technology to record observations, categorize items, and supplement their constructed response questions.
Assessments	Formative and summative textbook assessments. Constructed response (math, language arts, science) –

Content Area: Science Grade: K Quarter: 3

Big Idea(s) / Major Understanding(s): *Students will understand that...*
5 senses are used to make an observation.
Observations lead to questions and questions lead to more observations.
Weather and seasons change.
There are celestial objects in the day and night sky

HCPS III Benchmarks:

◊ *K.1.1* **Scientific Inquiry**
Use the senses to make observations

◊ *K.1.2* **Scientific Inquiry**
Ask questions about the world around them

◊ *K.2.1* **Science, Technology, and Society**
Identify different types of technologies at home, in the classroom, and/or in the world

◊ *K.6.1* **Nature of Matter**
Classify objects by their attributes (e.g., physical properties, materials of which they are made)

◊ *K.8.1* **Forces that Shape the Earth**
Report and describe weather changes from day to day and over the seasons

◊ *K.8.2* **The Universe**
Identify different types of celestial objects seen in the day and night sky

Sample Performance Rubrics

Topic	Scientific Inquiry		
Benchmark SC.K.1.1	Use the senses to make observations		
Sample Performance Assessment (SPA)	The student: Uses the five senses (i.e., sight, smell, hearing, touch, and taste) to make observations about objects and events.		
Rubric			
Advanced	**Proficient**	**Partially Proficient**	**Novice**
Use appropriate senses to make detailed observations on what is actually observed	Use appropriate senses to make observations on what is actually observed	Use the senses to make limited observations on what is observed	Use the senses to make observations that are inaccurate or inferred

Topic	Scientific Inquiry		
Benchmark SC.K.1.2	Ask questions about the world around them		
Sample Performance Assessment (SPA)	The student: Asks questions about objects, organisms, events, places, or relationships in the environment.		
Rubric			
Advanced	**Proficient**	**Partially Proficient**	**Novice**
Consistently ask relevant questions about the world around them	Usually ask relevant questions about the world around them	Sometimes ask questions, with assistance, about the world around them	Rarely ask questions, even with assistance, about the world around them
Topic	Science, Technology, and Society		
Benchmark SC.K.2.1	Identify different types of technologies at home, in the classroom, and/or in the world		
Sample Performance Assessment (SPA)	The student: Identifies examples of technologies that exist at home, in the classroom, and/or in the world (e.g., knife, pencil, computer, pencil sharpener, refrigerator).		
Rubric			
Advanced	**Proficient**	**Partially Proficient**	**Novice**
Identify and explain examples of technology at home, in the classroom, and/or in the world	Identify different types of technologies at home, in the classroom, and/or in the world	Provide limited examples of technologies at home, in the classroom, and/or in the world	Recognize, with assistance, examples of technologies at home or in the classroom

Topic	Forces that Shape the Earth		
Benchmark SC.K.8.1	Report and describe weather changes from day to day and over the seasons		
Sample Performance Assessment (SPA)	The student: Records daily and seasonal weather changes with simple symbols and describes how the weather changes over time.		
Rubric			
Advanced	**Proficient**	**Partially Proficient**	**Novice**
Report and describe, in detail, weather changes from day to day and over the seasons and identify weather patterns	Report and describe weather changes from day to day and over the seasons	Provide examples of weather changes from day to day and over the seasons	Give an example of a weather change

Topic	The Universe

Benchmark SC.K.8.2	Identify different types of celestial objects seen in the day and night sky
Sample Performance Assessment (SPA)	The student: Identifies different types of celestial objects seen in the day and night sky (e.g., sun, moon, stars).

Rubric			
Advanced	**Proficient**	**Partially Proficient**	**Novice**
Compare different types of celestial objects seen in the day and night sky	Identify different types of celestial objects seen in the day and night sky	Name a celestial object seen in the day or night sky	Recall that there are different types of celestial objects in the day or night sky

Lessons Summary

Lesson Day #	Lesson Title	What students will be able to know, do & understand
Unit Connections	Science Connect	**Weather observations calendar** Collecting data to support inquiry Rain gauge Wind-vane **MOON calendar** (begin adding moon data to st. calendars) Moon Book (SFA program) Go to google for daily moon or moonconnection.com
	LA Connect	Moonbear's Shadow by Frank Asch Skyfire Moonbear (remember that the terms that are used in the story are not "scientifically" accurate – refer to moon phases page)
Lesson 1	Pre-test	Teacher-created constructed response: "Draw and label at least two objects that you see in the day sky. Draw and label at least two objects that you see in the night sky." Teachers agree that the word "objects" refers to natural, non-living items.
HARCOURT TEXT – Earth/Space Science		
Lesson 2		I wonder what makes a rainbow? Big Book p.63 This is the connect between weather and the sky….. Use this question for formative assessment ---
Lesson 3	AIMS	THE SUN Pockets are hard to make… Create a "word bank" chart and then transfer the ideas about helpful/harmful things onto the RAYS before copying for the students. Then the students cut out and attach the pre-filled in rays onto

		their sun and illustrate what each ray said.
Lesson 4	Harcourt Text	The sun seems to move across the sky from morning to night Big Book p. 64 Inquiry lesson: where is the sun in the sky during different times of day? DASH SONG now recorded on several iPhones…plus electronic from Melinda – THE SUN IN RISING IN THE EAST Song: What's Up? Science song cd Track 12 Activity book p. 61 "Observe"
Lesson 5	P.E. Connect	PE connection – students role play (earth and sun) Nametag with earth - Hawaii on the face side and S. Africa is on the backside, so that when the student rotates, they see the sun in Hawaii during the day and do not see the sun at night. Song – THE SUN IS RISING IN THE EAST
	SS Connect	Connection to the cardinal directions Song – THE SUN IS RISING IN THE EAST
Lesson 6	Harcourt Text	Concept Review – Activity Book p. 62 "Day & Night" What can we see in the night sky? Day & Night Sky sort (notebook smartboard file) Day & Night Discovery Ed video file
Lesson 7	AIMS	Sun & Moon Book (use the double-sided master because it is keyed in the correct order – make team sets) Teacher then can connect the facts about the SUN to the idea that the sun is a star and stars are also in the night sky.
	Technology Connection	Using Kid Pix – have students type their name, date and the words "day" and "night". Students were to then draw or select stamps that were items found in the day/night sky
Lesson 8	AIMS Bishop Museum "Night Sky"	Dove & Horse Constellation (notebook smartboard file) Constellation Creations "A Sky Full of Stars" rubber-band book (Lucky charms cereal –star shaped pasta or cereal) Constellation connect-the-dots OPTIONAL: use a pattern/template. Put on top of black construction paper, poke holes through where the stars would be with a toothpick. Put over the light of the projector/document camera or over the end of a large cup with the bottom cut out. Web resource: JayJay the Jet website http://pbs.kids.org/jayjay/stry.home.html

Lesson 9	Optional	Meteors, International Space Station, planets, comets
Post-test		Same assessment as pre

Word Wall – Science words

Inquiry Standard:	observe, classify, compare/contrast, identify
Earth Science:	sun, clouds, rainbows, moon, sky, star, planet, right/left/center, sun, celestial
Technology:	tool, equipment, scientist (astronomer, meterologist, cartographer, planetary geologist)
Math:	tally, data, graph, data table, physical attributes