

CRM 4 Sun, Earth and Moon System

Pacing

- 25 days
- Nov. 13-Dec. 20
- Week 12-17

DESIRED RESULTS

Making Meaning

Concepts in the study of the Sun, Earth, and Moon System help explain many patterns of change we observe in the world around us. Students examine changes in the sky and build an understanding of the Earth and our place in the solar system. These concepts in this unit build a foundation for the study of Astronomy, Climate Change, and Environmental Sciences. The following make meaning valuable for learners and are investigated in this unit:

- The Sun, Earth, and Moon interact in a system and are intricately interconnected. The motion of the Sun, Earth, and moon and tilt of the Earth cause observable patterns: the apparent movement of the Sun in the sky, day/night, daily and seasonal changes in the length of shadows, seasons, phases of the moon, and the movement of stars in the night sky.
- Earth is part of a broader system: the solar system, which is a small part of the Milky Way Galaxy which is one of many galaxies in the universe.

Transfer: Students will observe, graph, and analyze patterns of change in both weather and objects in the sky to build an understanding of interactions among the Sun, Earth, and Moon.

Enduring Understandings:

- We can observe, describe and record objects and patterns in our sky and on Earth.

Essential Questions:

- What objects and patterns can we observe in the sky and on Earth?

Essential Vocabulary

- air / aire
- breeze / brisa
- calm / calma
- change / cambio
- clouds /nubes
- cold /frío
- cool /fresco
- dark / oscuro
- day/día
- Fall/otoño
- freezing /congelación
- hot /caliente
- illustrate/ilustrar
- light / luz
- moon / luna

- move / moverse
- night / noche
- pinwheel / rehilete
- precipitation/ precipitación
- rain gauge / pulviónmetro
- rainy /lluvioso
- season/estación
- sky/cielo
- spring/primavera
- stars/estrellas
- summer/verano
- Sun/Sol
- temperature/ temperatura
- wind/viento
- winter/invierno

Supporting Vocabulary Link

- [Elementary School Supporting Vocabulary](#)

Student Prerequisite Knowledge

Students should know:

- we can observe the natural world using our senses.
- there are patterns in nature we can record in drawings and words.
- we can observe that the sky changes daily.
- There is night and day.
- graphs can be used to show data and patterns of change.

Resources: AISD Module Kit, Model Lesson Portfolio, STEMscopes , eBooks: Envisions Science Levelled Readers, Scott Foresman Text, Science Notebook Resources , Weather Whiz Kids , Tree House Weather Kids - University of Illinois Extension , Weather Coloring Pages		
ELPS: Mandated by Texas Administrative Code (19 TAC §74.4), click on the link for English Language Proficiency Standards (ELPS) to support English Language Learners.		
TEKS Knowledge & Skills	Acquisition	
STAAR: RC = Reporting Category; DC = Dual Coded Skills; Readiness Standard ; Supporting Standard Concepts are addressed in another unit.	Students Will Know	Students Will Be Able To
K.8: Earth and space. The student knows that there are recognizable patterns in the natural world and among objects in the sky. The student is expected to:		
K.8A: observe and describe weather changes from day to day and over seasons.	<ul style="list-style-type: none"> • Weather is what we currently observe happening in our sky with precipitation, clouds, temperature and wind. • Weather changes from season to season. 	<ul style="list-style-type: none"> • Measure and record daily weather and changes in weather over time (temperature, precipitation, wind conditions, and cloud coverage). • Graph recorded weather data and look for patterns.
K.8B: identify events that have repeating patterns, including seasons of the year and day and night.	<ul style="list-style-type: none"> • Patterns occur in the cycle of the seasons and day/night. • Earth rotates causing day/night. 	<ul style="list-style-type: none"> • Illustrate and describe/discuss characteristics of the seasons cycle. • Illustrate and describe/discuss characteristics of the day/night cycle.
K.8C: observe, describe, and illustrate objects in the sky such as the clouds, Moon, and stars, including the Sun.	<ul style="list-style-type: none"> • Scientists observe, describe and illustrate objects in the sky: clouds, moon, Sun, and stars. 	<ul style="list-style-type: none"> • Observe and record patterns in the clouds, stars, position of the Sun in the sky, and moon. • Describe the patterns they observe and record both orally and in pictorial/written form.
The study of science is taught through the lens of Scientific Processes (TEKS K.1-K.4); therefore, these TEKS should be taught in conjunction with content throughout the year. Suggestions for TEKS to embed in each unit are provided in the Yearly Itinerary; however, the TEKS that can be addressed within a unit depends greatly on the learning activities in which students are engaged. Therefore, teachers must be deliberate in their choice of learning activities to ensure that all Scientific Processes TEKS are appropriately embedded within the course. In Kindergarten, districts are encouraged to facilitate laboratory and field investigations for at least 80% of instructional time.		

ASSESSMENT EVIDENCE	
Student Work Products/Assessment Evidence	
Performance Tasks	Other Evidence (i.e. unit tests, open ended exams, quiz, essay, student work samples, observations, etc.)
<ul style="list-style-type: none"> • Pictorially record daily weather for several weeks and use the sentence stem “Today’s weather is _____. The temperature is _____.” to talk about in classroom routines to internalize content area vocabulary. • Identify weather patterns observed during each season using the sentence stem I noticed that fall weather is_____. • Measure and record temperature for the entire unit, make a graph, and look for patterns. • Look for patterns in seasons and day/night cycles by reading data collected. • Descriptive investigations of the sky, clouds, moon, stars, and Sun by using the sentence stem the sky is _____. • Describe Cotton Ball Cloud Models by using the stem This model shows _____. • Create Constellation Models and present in front of peers using the sentence stem Constellations are_____. • Create Sun/Earth/Moon Model by following oral directions. 	<p>Additional Suggestions for Assessment</p> <ul style="list-style-type: none"> • Student Interactive Notebook • Student discussions • Weather charts and graphs • Day/Night T-Chart Diagram • Seasons 4-Square Graphic organizer/Computer Kidspiration project • Cloud observations and drawings • Sun/sky observations and drawings • Night sky observations using • Teacher observations: Use of safety rules and equipment • Teacher observations: management and use of tools • Tools foldable/web in Interactive Notebook • Students’ use of evidence to support explanations and claim.
LESSON PLANNING TOOLS	
<p>In the course of lesson planning, it is the expectation that teachers will include whole child considerations when planning such as differentiation, special education, English language learning, dual language, gifted and talented, social emotional learning, physical activity, and wellness.</p>	
<p>Model Lesson- Observing, Describing and Recording Weather</p> <ul style="list-style-type: none"> • Weather Watching • Cloud Watching • Rain Watching • Wind Watching • Temp. Watching <p>Suggested Pacing: (6 days) TEKS: K.8A</p>	
<p>Model Lesson- Patterns in Day/Night and Seasons</p> <ul style="list-style-type: none"> • Day and Night • Seasons <p>Suggested Pacing: (10 days) TEKS: K.8B</p>	
<p>Model Lesson- Objects in the Sky</p> <ul style="list-style-type: none"> • Clouds • Moon • Stars • Sun <p>Suggested Pacing: (9 days) TEKS: K.8C</p>	