

**CRM 5 Dynamic Earth**

**Pacing**

- 33 days
- Jan. 7-Feb.22
- Week 18-24

**DESIRED RESULTS**

**Making Meaning**

Concepts in the study of Earth science help explain many changes we observe around us. Investigations in the physical sciences help lay a foundation for students to understand the size, age, construction, and behavior of Earth. In addition, studies in life science are partially rooted in Earth science since Earth is the only planet known to support life. Earth science concepts connect with all the other disciplines and connect the concepts in the other strands of science together. These concepts build a foundation for the study of geology, geological history, geophysics, geochemistry, geobiology, climate change, and environmental sciences. Students build an understanding of the Earth and our place in the solar system and the universe.

The following make meaning valuable for learners and are investigated in this unit:

- Earth is a unique water planet that supports life.
- Earth’s surface is constantly changing due to the forces of moving wind, water, and ice.
- Forces below the surface of the Earth cause dramatic, quick changes to Earth’s surface.
- Earth produces natural resources that meet the needs of humans and other organisms.
- Earth recycles its materials.
- Humans have an impact on Earth.

**Transfer:** Students understand that models of the Earth’s surface and processes are simplified representations of real objects and processes, and that models serve as a means to communicate ideas and knowledge about how these Earth processes work.

**Enduring Understandings:**

- As we observe rocks and soil, they tell us about their past.
- Water is found on Earth in its oceans, lakes, rivers, and ponds.
- Earth produces resources that meet our needs.

**Essential Questions:**

- What do the characteristics of rocks and soil tell us about their past?
- Where does all our water come from, and how do we describe it?
- How do we use materials we find in our natural world?

**Essential Vocabulary**

- balance/ balanza
- lake/ lago
- liquid/ líquido
- man-made/ creados por el hombre, artificial, sintético
- mass/ masa
- natural resources/ recursos naturales
- ocean/ océano
- pollution/ contaminación

- properties/ propiedades
- recycling/ reciclado
- river / río
- rocks/ rocas
- salt water/ agua salada
- soil/ suelo, tierra
- solar energy/ energía solar
- source/ fuente
- stream/ arroyo
- texture/ textura
- water/ agua

**Supporting Vocabulary Link**

- [Elementary School Supporting Vocabulary](#)

**Student Prerequisite Knowledge**

*Students should know:*

- Rocks are all around us in our world.
- rocks come in all kinds of shapes and sizes.
- water is all around us.
- we drink water to stay alive.
- soil is all around us under our feet.

**Resources:** Scott Foresman, [Science](#), AISD Module Kit, [STEMScopes](#), [Scientist’s Notebook Samples and Resources](#), [Pearson Online Readers](#)

**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; <b>Readiness Standard</b> ; <b>Supporting Standard</b> Concepts are addressed in another unit.	Students Will Know	Students Will Be Able To

K.7: Earth and space. The student knows that the natural world includes earth materials. The student is expected to:

K.7A: observe, describe, compare, and sort rocks by size, shape, color, and texture	<ul style="list-style-type: none"> <li>• Rocks come in all kinds of shapes, sizes, colors, and textures.</li> <li>• Scientists describe rocks by their properties.</li> <li>• Rocks can be sorted by their properties.</li> <li>• Properties of rocks determine how they can be used.</li> </ul>	<ul style="list-style-type: none"> <li>• Measure rocks.</li> <li>• Observe, describe, and compare rocks by size, shape, color, and texture.</li> <li>• Sort rocks by their properties.</li> <li>• Tell what might be made from that type of rock based on its properties.</li> </ul>
K.7B: observe and describe physical properties of natural sources of water, including color and clarity.	<ul style="list-style-type: none"> <li>• Water differs in color and clarity when it contains minerals.</li> <li>• Water can be polluted.</li> <li>• Water we drink is purified.</li> </ul>	<ul style="list-style-type: none"> <li>• Observe and describe physical properties of water, including color and clarity.</li> <li>• Compare the water from different sources.</li> <li>• Pollute and observe water and compare it to clear water.</li> </ul>
K.7C: give examples of ways rocks, soil, and water are useful.	<ul style="list-style-type: none"> <li>• Natural resources are found in nature.</li> <li>• Man uses resources to make things for everyday use and meet needs.</li> <li>• Resources are reusable and recyclable.</li> </ul>	<ul style="list-style-type: none"> <li>• Classify resources as natural or man-made.</li> <li>• Give examples of ways rocks, soil, and water are useful.</li> <li>• Demonstrate how we can use, reuse, recycle, and conserve natural resources.</li> </ul>

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.)
<p>Students investigate the following with hands-on labs:</p> <ul style="list-style-type: none"> <li>• Rocks</li> <li>• Bodies of Water</li> <li>• Flowing Water</li> <li>• Observing Water</li> <li>• Looking for pollution</li> <li>• Recycling data collection</li> </ul> <p>Student oral descriptions of the following concepts:</p> <ul style="list-style-type: none"> <li>• properties of rocks</li> <li>• properties of water sources</li> <li>• examples of ways soil, water, and rocks are useful</li> </ul>	<ul style="list-style-type: none"> <li>• Student science notebooks and Lab Notes</li> <li>• Teacher observations and questioning</li> <li>• Graphic organizer of soil components</li> <li>• Water Planet</li> <li>• Water Sources</li> <li>• Flowing water student sheets</li> <li>• Useful products made of/with rocks/soil/water.</li> <li>• Teacher observations: Use of safety rules and equipment</li> <li>• Teacher observations: management and use of tools</li> <li>• Tools foldable/web in Interactive Notebook</li> <li>• Students' use of evidence to support explanations and claims.</li> </ul>
LESSON PLANNING TOOLS	
<p><b>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.</b></p>	
<p><b>Science Fair 5 Days</b>  <i>Use questions and student interest from the beginning and throughout the year to guide students through a descriptive investigation. If you have made an Inquiry Board to showcase student questions and ideas, validate student thinking with reading and talking about how as a scientist, each of their questions might be answered using scientific investigations. Remember that scientists answer questions in many ways, not just experimental investigations: building models, observations, observations and data collection over time, research and collaboration with other scientists.</i></p>	
<p><b>Model Lesson- <a href="#">Earth Materials: Rocks</a></b></p> <ul style="list-style-type: none"> <li>• Observing Rocks <ul style="list-style-type: none"> <li>○ Measuring Rocks</li> <li>○ Rock Color</li> <li>○ Rock Texture</li> <li>○ Rock Shape</li> </ul> </li> <li>• Sorting Rocks</li> </ul> <p>Suggested Pacing: (5 days)  TEKS: K.7A</p>	
<p><b>Model Lesson- <a href="#">Earth Materials: Water</a></b></p> <ul style="list-style-type: none"> <li>• Properties of Water</li> <li>• Water Sources</li> <li>• Water Pollution</li> <li>• Water Conservation</li> </ul> <p>Suggested Pacing (9 days)  TEKS: K.7B</p>	
<p><b>Model Lesson- <a href="#">Earth Materials: Natural Resources</a></b></p> <ul style="list-style-type: none"> <li>• Natural Resources</li> <li>• Reduce, Reuse, Recycle</li> </ul> <p>Suggested Pacing: (14 days)  TEKS: K.7C</p>	