

CRM 1 Inquiry

Pacing

- 14 days
- Aug. 27-Sept.14
- Week 1- 3

DESIRED RESULTS

Making Meaning

The study of elementary science is multifaceted and requires a variety of student experiences to build understanding of the nature of science including the following:

- Understanding the nature and development of scientific knowledge.
- Participating safely and productively in scientific inquiry and discourse in lab and field experiences at varying degrees of independence.
- Knowing, using and interpreting scientific explanations of the natural world.
- Using scientific observations and tools to collect data to generate and evaluate evidence and explanations.

Transfer: Scientific literacy is established in learning to conduct an investigation and collect evidence from a variety of sources, develop an explanation from the data, and communicate thinking.

Enduring Understandings:

- Scientists raise questions about the world around them and seek answers by careful observation and investigation.
- Scientists give reasons (evidence) for their claims and conclusions and consider reasons suggested by others.
- Scientists keep a notebook as a thinking tool and use questions, diagrams, charts, graphs, conclusions, and wonderings to record and share their thinking.
- Scientists use tools and safety measures to investigate the natural world.

Essential Questions:

- How do we raise questions and seek answers about the world around us?
- How do we record and share our observations, thinking, and conclusions in science?
- What tools and safety measures do scientists use to investigate the natural world?

Essential Vocabulary

- balance / balanza
- communicate / comunicar
- computer/ computadora
- data / datos
- directions/instrucciones
- emergency/emergencia
- explain / explicar
- goggles/lentes de seguridad
- graph/gráfica
- hand lens / lupa
- hear / sentido del oído
- hypothesis/hipótesis
- identify/ identificar
- instrument/instrumento
- investigate / investigar
- lab/ laboratorio
- magnet / imán
- measure / medida
- notebook / cuaderno

- numbers / numeros
- observe / observer
- pattern/patron
- predict / predecir
- problem/ problema
- property/ propiedad
- question/ pregunta
- record/anotar
- safety / seguridad
- scientist/científico
- see/sentido de la vista
- senses / sentidos
- smell / sentido del olfato
- solution/solución
- sort / selecciona
- taste /sentido del gusto
- thermometer/termómetr
- timer / cronómetro
- tools/instrumentos
- touch/sentido del tacto

Supporting Vocabulary Link

- [Elementary School Supporting Vocabulary](#)

Student Prerequisite Knowledge <ul style="list-style-type: none"> • Scientists use their senses to gather information. • Scientists do science safely. • Scientists use tools to gather information. • Scientists use drawings, charts, and graphs to record and make meaning of data. 		
Resources: AISD Module Kit, Model Lesson Portfolio, STEMscopes , eBooks: Envisions Science Leveled Readers, Scott Foresman Text, Science Notebook Resources , BrainPop Jr. , Discovery Education		
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.1 The student conducts classroom and outdoor investigations following home and school safety procedures And uses environmentally appropriate and responsible practices. The student is expected to:		
K.1A: identify and demonstrate safe practices as described in the Texas Safety Standards during classroom and outdoor investigations, including wearing safety goggles, washing hands, and using materials appropriately	<ul style="list-style-type: none"> • Know safe practices in the classroom and out of doors. • Know appropriate safety apparel and procedures. 	<ul style="list-style-type: none"> • Follow classroom, lab, and outdoor safety procedures.
K.1B: discuss the importance of safe practices to keep self and others safe and healthy	<ul style="list-style-type: none"> • Know the importance of safe practices. 	<ul style="list-style-type: none"> • Discuss the importance of safety practices.
K1.C: demonstrate how to use, conserve, and dispose of natural resources and materials such as conserving water and reusing or recycling paper, plastic, and metal	<ul style="list-style-type: none"> • Know appropriate procedures for disposal, recycling, and conservation of materials. 	<ul style="list-style-type: none"> • Dispose of or recycle materials in their daily life.
K.2 The student develops abilities to answer questions and seek answers in classroom and outdoor investigations. The student is expected to:		
K.2A: ask questions about organisms, objects, and events observed in the natural world.	<ul style="list-style-type: none"> • Questioning the world around us is natural. • There is more than one way to answer a question. 	<ul style="list-style-type: none"> • Be curious about the world around them. • Ask questions about organisms, objects and events observed in the natural world.
K.2B: plan and conduct simple descriptive investigations such as ways objects move;	<ul style="list-style-type: none"> • Descriptive investigations involve data collection and analysis. 	<ul style="list-style-type: none"> • Plan and conduct simple descriptive investigations.

K.2C: collect data and make observations using simple equipment such as hand lens, primary balances, and non-standard measurement tools;	<ul style="list-style-type: none"> • Scientific equipment is used to collect data from observations. • A balance is used to measure mass. 	<ul style="list-style-type: none"> • Collect data and make observations. • Measure accurately using a primary balance and non-standard measurement tools. • Use a hand lens to make observations.
K.2D: record and organize data and observations using pictures, numbers and investigations.	<ul style="list-style-type: none"> • Pictures, numbers, graphs, and words can be used to record data. 	<ul style="list-style-type: none"> • Record and organize data using pictures, numbers, graphs, and words.
K.2E: communicate observations with others about simple descriptive investigations.	<ul style="list-style-type: none"> • Communication about investigations is based on observations. 	<ul style="list-style-type: none"> • Communicate observations about investigations.
K.3 The student knows that information and critical thinking are used in scientific problem solving. The student is expected to:		
K.3A: identify and explain a problem such as the impact of littering on the playground and propose a solution in his/her own words;	<ul style="list-style-type: none"> • When problem solving, a solution is based on an identified problem. 	<ul style="list-style-type: none"> • Identify and explain a problem. • Propose a solution for a problem.
K.3B: make predications based on observable patterns in nature such as the shapes of leaves;	<ul style="list-style-type: none"> • Predictions are based on observable patterns. 	<ul style="list-style-type: none"> • Describe patterns and relationships, and predict what will happen next.
K.3C: explore that scientists investigate different things in the natural world and use tools to help in their investigations.	<ul style="list-style-type: none"> • Scientists investigate the world around them. • Scientists have many different areas of focus. 	<ul style="list-style-type: none"> • Explore that scientists investigate different things using tools.
K.4 The student uses age-appropriate tools and models to investigate the natural world. The student is expected to:		
K.4A: collect information using tools, including computers, hand lenses, primary balances, cups, bowls, magnets, collecting nets, and notebooks; timing devices, including clocks and timers; nonstandard measuring items such as paper clips and clothespins; weather instruments such as demonstration thermometers and wind socks; and material to support observations of habitats of organisms such as terrariums and aquariums;	<ul style="list-style-type: none"> • Tools are used to make observations and collect data. 	<ul style="list-style-type: none"> • Collect, record, and analyze information using tools.
K.4B: use senses as a tool of observation to identify properties and patterns of organisms, objects, and events in the environment.	<ul style="list-style-type: none"> • Properties of matter may be observed and identified. • Patterns exist in the natural world. 	<ul style="list-style-type: none"> • Use their five senses as tools to observe the natural world.

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"> • Observe and identify objects using five senses • Use simple tools to observe and investigate the natural world: hand lens, balance, measuring tools, and notebook. • Lab: Mouse Paint • Conduct a simple descriptive investigation • Record and classify data in their Interactive Notebooks using pictures, numbers and words • Create a “Fragrant Treasure Book” 	<p>Additional Suggestions for Assessment</p> <ul style="list-style-type: none"> • Students ask questions about the natural world around them • Use scientific vocabulary in communicating observations • Finish sentence stems to communicate observations • Record and organize data in their Student Interactive Notebook • Identify the five senses • Describe and compare different sights, sounds and scents • Teacher observations: Use of safety rules and equipment • Teacher observations: management and use of tools • Tools foldable/web in Interactive Notebook • Follow safety rules during labs • Given a problem, use scientific processes to problem solve • Use scientific vocabulary to communicate observations and findings

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- Inquiry</p> <ul style="list-style-type: none"> • What is Science? • Using Our Senses to Explore the World Around Us • Let’s Be Scientists- Descriptive Investigations <p>Suggested Pacing: (14 days) TEKS: K.1, K.2, K.3, K.4</p>