CRM 6 Organisms & Environments	**Pacing** • **66 days** • **Feb.25-June5** • **Weeks 25-38**

DESIRED RESULTS

Making Meaning

The study of life sciences looks at patterns, processes, and relationships of living organisms and their environment. Life scientists use observations, experiments, tests, models, theory and technology to investigate life on planet Earth. The study of life science includes investigating the following:

- Organisms interact with each other and with their environment.
- Organisms have basic needs that are met in their environment, or they will not survive.
- Organisms grow, change, and reproduce as adults.
- Individual organisms have structures and behaviors that help them survive.
- Individual organisms inherit traits from generation to generation.

Transfer: Students will use inquiry and work cooperatively to investigate living organisms to build an understanding of basic needs and how organisms interact with other living organisms and non-living elements in their environment. They will communicate and make connections of how inherited traits aid survival and how organisms change over time.

Enduring Understandings:

- All organisms have basic needs to survive.
- Basic needs can be met through interactions with living and nonliving things.
- Organisms have inherited parts that help them meet their needs.
- Organisms change over time.

Essential Questions:

- How do organisms depend on their environment and their structures to survive?
- What changes do organisms go through in their life cycle?
- Why do organisms resemble their parents?

Essential Vocabulary

- aquarium /acuario
- chick / pollito, polluelo
- chicken / gallina
- climb / trepar, escalar
- desert / desierto
- egg / huevo
- external/externo
- flower/flor
- food chain / cadena alimenticia
- forest / selva
- frog / rana
- habitat/habitat
- hatch / incubar
- leaves/hojas
- life cycle/ciclo de vida
- offspring/hijos
- ocean / océano
- organism / organismo
- parents/padres
- root/raíz
- shelter/refugio
- stage / etapa
- stem/tallo
- survive/sobrevivar
- tadpole / renacuajo
- terrarium / terrario

Supporting Vocabulary Link

- Elementary School Supporting Vocabulary

Student Prerequisite Knowledge

Students should know:

- living things have needs and produce offspring.
- non-living things help living things meet their needs, but do not have needs.
- organisms have basic needs.
- plants need air, water, nutrients, sunlight, and space to live.
- animals need food, water, and shelter.
- different plants and animals have external characteristics that help them live in different kinds of places.
- the size and shape of leaves helps them collect large or smaller amounts of sunlight in their habitat.
- plants and animals have parts that can be identified and named.
- plants and animals have and use parts to help them live in their habitat.
- young animals (offspring) resemble their parents and each other in many ways.
- plants and animals are similar to their parents in color, size, and shape.
- the stages of a simple plant life cycle.

Resources: Scott Foresman, Science , STC: Organisms Investigations, 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** *Important knowledge and skills*	
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**
1.9: Organisms and environments. The student knows that the living environment is composed of relationships between organisms and the life cycles that occur. The student is expected to:		
1.9A: sort and classify living and nonliving things based upon whether or not they have basic needs and produce offspring.	• Most animals need food, water, and air to meet their basic needs and survive. • Plants need sunlight to make their own food. • Organisms have offspring, usually with two parents involved.	• Identify living things in their environment. • Identify nonliving things in their environment. • Sort and classify living and nonliving things.
1,9B: analyze and record examples of interdependence found in various situations such as terrariums and aquariums or pet and caregiver.	• All organisms depend on each other or nonliving things in their environment to stay alive.	• Explain how organisms in certain environments meet their needs. • Record examples of organisms depending on each other and other nonliving objects to meet their needs. • Analyze interdependence in an aquarium, terrarium, or real world environment.

1.9C: gather evidence of interdependence among living organisms such as energy transfer through food chains and animals using plants for shelter.	• Energy is needed by all organisms to stay alive and grow. • Energy is transferred from one organism to another in a food chain or web. • Organisms meet their needs using nonliving things and living things in their environment.	• Give examples of ways plants and animals meet their needs. • Gather evidence (record, take digital pictures, or draw) of relationships and interdependence in an environment. • Use diagrams of food chains to show how energy is transferred in a food chain. • Identify examples of animals using plants for shelter, or other examples of interdependence using videos and pictures.
1.10: Organisms and environments. The student knows that organisms resemble their parents and have structures and processes that help them survive within their		
1.10A: investigate how the external characteristics of an animal are related to where it lives, how it moves, and what it eats.	• Living things are found almost everywhere in the world. • Different plants and animals have external characteristics that help them live in different kinds of places. • These characteristics help them seek, find, and take in food when they feel hunger. (For example, most mammals have eyes, ears, and nose for detecting food, arms and legs to get it, arms and hands to carry it away, and a mouth/teeth to eat it.) • Animals movement helps them survive in their habitats.	• Observe external characteristics of plants and animals in different environments. • Investigate how an animal's external characteristics, how it moves, and what it eats are related to where it lives. • Analyze the characteristics of different organisms and how these characteristics help them survive in their unique habitat. • Act out and describe how certain animals move.
1.10B: identify and compare the parts of plants.	• Plants have different parts, and these parts help them meet their needs. • Some plants make flowers to help them reproduce. • Other plants make spores or cones to reproduce.	• Observe many different kinds of plants. • Identify and compare the parts of plants. • Use pictures and real plants to identify parts. • Make a plant model (drawing or anchor) to identify plant parts.
1.10C: compare ways that young animals resemble their parents.	• Young animals (offspring) resemble their parents and each other in many ways. • Animals change in looks and behavior as they grow.	• Compare ways that young animals resemble their parents. • Explain how young animals are different, and how they might change over time to look much like their parents.
1.10D: observe and record life cycles of animals such as a chicken, frog, or fish.	• Organisms go through observable changes over time called a life cycle.	• Observe and record life cycles of animals using videos, models, and if possible live specimens.

The study of science is taught through the lens of Scientific Processes (TEKS 1.1-1.4); 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 1st grade, 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.)**
Students investigate the following with hands-on labs and activities: • Living and Non-Living • Terrarium and Aquarium Environments • Animal Life Cycles • Plant Parts Investigations • Observe and Compare Plant Parts • Animal Characteristics • Comparing Organisms from Different Habitats • Comparing the external characteristics of plants and animals from different environments • Investigating Food Chains • Animal Young Resemble Their Parents	• Science Notebooks and Lab Notes • Teacher Observations and Questioning • Exploring Characteristics of Living Things Student Sheet • Living/Non-Living T-Chart • Observing Leaves Student Sheet • Observing Stems Student Sheet • Observing Roots Student Sheet • Observing Flowers Student Sheet • Plant Parts Technical Drawings • Observing Freshwater Plants Record Sheet • Freshwater Picture Record Sheet • Observing Freshwater Animals Record Sheet • Observing Woodland Animals Record Sheet • Life Cycle Drawings • Mind Map of Food Chains • Evidence of Interdependence (digital pictures, drawings, and recorded observations) • Parent and Young Comparisons • Animal Research Project

LESSON PLANNING TOOLS
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.
Model Lesson- Living and Non-Living • Living/Non-Living Suggested Pacing: (5 days) TEKS: 1.9A
Model Lesson- Plants • Observing and Comparing Plant Parts Suggested Pacing (5 days) TEKS: 1.10B
Model Lesson- Animal Characteristics • Observing and Identifying Animal Characteristics • Animals from Different Habitats Suggested Pacing (9 days) TEKS: 1.10A
Model Lesson- Animals and Their Young • Animals and Their Babies • Life Cycles Suggested Pacing: (10 days) TEKS: 1.10C, 1.10D
Model Lesson- Interdependence • Relationships in Nature • Food Chains Suggested Pacing: (15 days) TEKS: 1.9B, 1.9C
Model Lesson- Animal Research Project • Animal Research Suggested Pacing: (15 days) TEKS: 1.10A
Model Lesson- Health Lessons Suggested Pacing: (7 days) TEKS: HE 1.2H, HE 1.3 A-C, HE 1.5A, HE 1.8A, HE 1.9C