

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

- adult/adulto
- air/aire
- basic needs/necesidades básicas
- behavior/ conducta
- caterpillar / oruga
- chrysalis / crisálida
- depend/depender
- dormancy/inactividad
- dormant / aletargado
- ecosystem/ecosistema
- environment/medio ambiente
- flower/flor
- food chain / cadena alimenticia
- growth/ crecimiento
- habitat/hábitat
- herbivore/herbíoro
- hibernate/ hibernar
- jaw / mandíbula

- leaves/hojas
- locomotion/ locomoción
- lower lip / labio inferior
- metamorphosis/ metamorfosis
- migration / emigración
- omnivore/omnívoro
- predator/depredador
- prey/presa
- physical characteristics /característica física
- proboscis / trompa
- producer / productor
- pupa/crisálida
- root/raíz
- scavenger / carroñero
- simple eye / ojo simple
- stage/etapa
- stem/tallo
- sunlight/luz solar
- upper lip / labio superior

Supporting Vocabulary Link

- [Elementary School Supporting Vocabulary](#)

<p>Student Prerequisite Knowledge <i>Students should know:</i></p> <ul style="list-style-type: none"> • 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. • all organisms depend on each other or non-living things in their environment to stay alive. • 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. 		
<p>Resources: AISD Module Kit, Model Lesson Portfolio, STC: The Life Cycle of Butterflies Investigations, STEMscopes, eBooks: Envisions Science Leveled Readers, Scott Foresman Text, Science Notebook Resources, BrainPop Jr., Discovery Education, Differentiation Strategies & Resources</p>		
<p>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.</p>		
<p>TEKS Knowledge & Skills</p>	<p>Acquisition</p>	
<p>STAAR: RC = Reporting Category; DC = Dual Coded Skills; Readiness Standard; Supporting Standard Concepts are addressed in another unit.</p>	<p>Students Will Know</p>	<p>Students Will Be Able To</p>
<p>2.9: Organisms and environments. The student knows that living organisms have basic needs that must be met for them to survive within their environment. The student is expected to:</p>		
<p>2.9A: identify the basic needs of plants and animals.</p>	<ul style="list-style-type: none"> • Plants and animals must meet their basic needs to survive. • Plants need air, water and nutrients to make food, space, and sunlight to survive. • Animals require air, food, water, space, and shelter to survive. 	<ul style="list-style-type: none"> • Identify living things in their environment. • Identify the basic needs that plants meet in their environment. • Identify the basic needs that animals meet in their environment.
<p>2.9B: identify factors in the environment, including temperature and precipitation, that affect growth and behavior such as migration, hibernation, and dormancy of living things.</p>	<ul style="list-style-type: none"> • Environmental changes may affect the growth and behavior of organisms and cause them to change. • Organisms must sense, interact with, and respond to their environment because they need nutrients and energy from the environment. • Dormancy in plants and seeds can be caused by decreased precipitation, temperature changes, or changes in daylight hours. • Migration and hibernation in animals can be caused by changes in temperature, precipitation, or daylight hours. 	<ul style="list-style-type: none"> • Identify how temperature changes and precipitation cause changes in growth and behavior of organisms. • Give examples of migration, hibernation, and dormancy and tell what causes these changes in animal behavior. • Describe why plants and seeds go dormant. (What changes cause these responses in the plants?). • Identify why organisms change.

<p>2.9C: compare and give examples of the ways living organisms depend on each other and on their environments such as food chains within a garden, park, beach, lake, and wooded area.</p>	<ul style="list-style-type: none"> • Plants and animals depend on one another and their environment to meet their needs. • Food chains show the cycle of energy from the Sun to plants to animals, and back into the soils. • Food chains differ and may be found in any environment such as a garden, park, beach, lake, and wooded area. 	<ul style="list-style-type: none"> • Describe and draw ways organisms depend on their environment and other organisms. • Draw and describe the flow of energy through food chains within gardens, parks, beaches, lakes, and wooded areas. • Compare the way organisms depend on each other and their environment.
<p>2.10: Organisms and environments. The student knows that organisms resemble their parents and have structures and processes that help them survive within their environments. The student is expected to:</p>		
<p>2.10A: observe, record, and compare how the physical characteristics and behaviors of animals help them meet their basic needs such as fins help fish move and balance in the water.</p>	<ul style="list-style-type: none"> • Animals have external characteristics that help meet their basic needs, such as a fish’s fins, a bird’s wings, an owl’s head turning 270 degrees in either direction, a cat’s claws, a human using an opposable thumb, camouflage coloration in butterflies and moths, or an elephant’s ears and trunk. • Animals use behaviors to help them meet their basic needs, like hunting, swimming, or flying. • Animals use both external and behavioral characteristics to help meet their basic needs of air, water, and food. 	<ul style="list-style-type: none"> • Make and record daily observations of the way butterflies and other organisms meet their needs. • Compare the physical characteristics of different animals and tell how that characteristic helps it meet its needs. • Compare the behaviors of animals in different habitats and tell how that animal meets its needs using that behavior.
<p>2.10B: observe, record, and compare how the physical characteristics of plants help them meet their basic needs such as stems carry water throughout the plant.</p>	<ul style="list-style-type: none"> • Plants have parts that help them meet their needs. • Roots secure a plant and absorb water and nutrients from the soil, stems of plants carry water to other parts of the plant, and leaves absorb and use sunlight to make food. • Physical characteristics of plants like thorns and spines on cactus help them survive in different environments. 	<ul style="list-style-type: none"> • Observe and record growing plants to see how their plant parts help them meet their needs. • Compare the parts of a plant to its function to see how it is uniquely suited to perform that role. • Compare the physical characteristics of plants that are uniquely suited to live in harsh environments.
<p>2.10C: investigate and record some of the unique stages that insects undergo during their life cycle.</p>	<ul style="list-style-type: none"> • Insects undergo distinct changes during their lives called the “life cycle.” • Some insects go through stages including egg, larva, pupa, and adult. • Insect behavior and appearance can be very different in their life cycle stages. 	<ul style="list-style-type: none"> • Investigate the life cycle of butterflies and record the daily changes. • Research changes other insects go through in their life cycle and illustrate. • Compare various insect life cycles.

The study of science is taught through the lens of [Scientific Processes \(TEKS 2.1-2.4\)](#); 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 2nd grade, districts are encouraged to facilitate laboratory and field investigations for at least 60% 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 and activities:</p> <ul style="list-style-type: none"> • Suggested Dual Language Activity 1 & 2 Plant Parts and Life Cycle Lab: Students identify and label the parts of a plant and create a foldable explaining the life cycle of the plant. • Butterfly Life Cycle Lab • Caterpillar Model • Field Journal Observations • Light Box Lab 	<p>Teacher observations and questioning</p> <p>Science Notebooks and Lab Notes:</p> <ul style="list-style-type: none"> • Basic needs of plants/animals foldable or graphic organizer. • Record and analyze environmental changes that cause organisms to change their behavior. • Research, draw, and compare food chains from different habitats. • Technical drawings or labeled pictures of various organisms that tell how it is structured to meet its needs to survive. (Why an elephant has a trunk, a tiger has stripes, why a lion has claws.) • Animal Comparisons • Labeled technical drawings of plants and the function of each part. • Labeled technical drawings of the life cycle of a butterfly.
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- Plants</p> <ul style="list-style-type: none"> • Plants and Their Needs • Plant Parts • Plants and the Environment • Plant Life Cycles <p>Suggested Pacing: (10 days) TEKS: 2.9A, 2.9B, 2.10B</p>	
<p>Model Lesson- Animals</p> <ul style="list-style-type: none"> • Basic Needs of Animals • Animal Characteristics and Classifications • Animals Meet Their Needs • Environmental Changes that Affect Growth and Behavior <p>Suggested Pacing (14 days) TEKS: 2.9A, 2.9B, 2.10A</p>	

Model Lesson- [Food Chains](#)

- Food Chains and Food Webs
- Food Chains in the Garden, Park, Lake, Woods, and Ocean

Suggested Pacing (10 days)

TEKS: 2.9C

Model Lesson- [Life Cycles](#)

- STC, The Life Cycle of Butterflies, Lessons 1-15

Suggested Pacing: (25 days)

TEKS: 2.10C

Model Lesson- [Health Lessons](#)

Suggested Pacing (7 days)

TEKS: HE2.2F HE2.5C, HE2.6A, HE2.8A-B, HE2.9A, HE2.10A-C, HE2.11D