

CRM 6 Organisms & Environments

Pacing

- 66 days
- Feb.25-June 5
- 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

- absorb/absorber
- adaptation/adaptación
- characteristic/ característica
- community / comunidad
- competition/competencia
- consumer/consumidor
- crayfish / langostino
- decomposer /descomponedor
- desert /desierto
- drought /sequía
- ecosystem /ecosistema
- environmental changes/ cambios en el medio ambiente
- extinct /extinto
- flood / inundación
- exoskeleton/ exoesqueleto

- food chain/cadena de alimento
- function/function
- germinate / germinar
- human/humano
- inherited / heredar
- learned/aprendido
- limbs/miembro
- offspring/hijo
- perish/fallecer
- physical/físico
- population / población
- predator /depredador
- prey / presa
- producer/productor
- reproduction/reproducción
- structure / estructura
- survive/sobrevivir
- thrive/crecer
- trait / rasgo

Supporting Vocabulary Link

- [Elementary School Supporting Vocabulary](#)

<p>Student Prerequisite Knowledge <i>Students should know:</i></p> <ul style="list-style-type: none"> • the difference between living and non living . • ways that organisms develop, live and survive . • ways that some organisms depend on one another. • 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. • 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. 		
<p>Resources: Scott Foresman, Science, FOSS: Structures of Life Investigations, AISD Module Kit, STEMScopes, Scientist's Notebook Samples and Resources, Pearson Online Readers, FOSSWeb.com, Differentiation Strategies & Resources document</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>3.9: Organisms and environments. The student knows and understands that living organisms within an ecosystem interact with one another and with their environment. The student is expected to:</p>		
<p>3.9A: observe and describe the physical characteristics of environments and how they support populations and communities within an ecosystem.</p>	<ul style="list-style-type: none"> • Environments have unique physical characteristics that provide food, water, air, shelter and/or protection to populations and communities within an ecosystem. • Nonliving parts of an environment, such as the amount of available sunlight and water, temperature range, and the type of soil, have a big influence on what types of plants and animals will be able to live there. 	<ul style="list-style-type: none"> • Observe various environments and record their populations, communities and the non-living parts of that environment. • Describe how the organisms have their needs met within that environment.
<p>3.9B: identify and describe the flow of energy in a food chain and predict how changes in a food chain affect the ecosystem such as removal of frogs from a pond or bees from a field.</p>	<ul style="list-style-type: none"> • Energy in a food chain flows from the Sun into plants, and animals get their energy from plants and other organisms. • Whatever affects one part of a food chain affects all the organisms in that ecosystem. 	<ul style="list-style-type: none"> • Use specimens, models, charts and diagrams to describe the flow of energy in a food chain. • Predict how changes to one organism in a food chain affect the entire ecosystem.
<p>3.9C: describe environmental changes such as floods and droughts where some organisms thrive and others perish or move to new locations.</p>	<ul style="list-style-type: none"> • Changes to an environment can affect whether certain organisms can survive in that ecosystem. • Environmental changes such as floods, droughts, or fires will cause some organisms to become extinct, others to move or adapt, or allow other organisms to thrive. 	<ul style="list-style-type: none"> • Describe and predict what might happen when floods, droughts, and fires happen in an ecosystem. • Describe the cause/effect relationships that occur when change occurs within an ecosystem.

<p>3.10: Organisms and environments. The student knows that organisms undergo similar life processes and have structures that help them survive within their environments. The student is expected to:</p>		
<p>3.10A: explore how structures and functions of plants and animals allow them to survive in a particular environment.</p>	<ul style="list-style-type: none"> organisms have unique adaptations that allow them to survive in specific habitats. certain plants and animals are uniquely suited for survival in extreme cold climates. certain plants and animals are uniquely suited for survival in extreme dry, hot climates. 	<ul style="list-style-type: none"> analyze the structures and their functions of plants and animals that allow them to survive in certain environments. draw and label these structures and tell how they help the organism meet their needs in that environment.
<p>3.10B: explore that some characteristics of organisms are inherited such as the number of limbs on an animal or flower color and recognize that some behaviors are learned in response to living in a certain environment such as animals using tools to get food.</p>	<ul style="list-style-type: none"> organisms inherit physical characteristics from their parents or their parent plant. behaviors of plants and animals are learned in response to the environment. 	<ul style="list-style-type: none"> discuss and compare the traits and/or behaviors of many different organisms. decide if a given characteristic is inherited from the parents or a learned behavior.
<p>3.10C: <i>investigate and compare how animals and plants undergo a series of orderly changes in their diverse life cycles such as tomato plants, frogs, and lady bugs</i></p>	<ul style="list-style-type: none"> organisms undergo observable changes during their life cycle. over the Earth, organisms are being born, grow, die, decay, and new organisms are produced from the parent organism. some young look like their parents while others undergo radical changes before they look like their parents. 	<ul style="list-style-type: none"> investigate the changes that occur as organisms grow and develop. create diagrams and/or models that show the orderly changes.
<p>The study of science is taught through the lens of Scientific Processes (TEKS 3.1-3.4); 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 3rd grade, districts are encouraged to facilitate laboratory and field investigations for at least 60% of instructional time.</p>		

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"> • FOSS, Structures of Life, Inv. 1 Part 2, 3 The Sprouting Seed, Seed Soak • FOSS, Structures of Life, Inv. 2 Part 1, 3 Germination, Life Cycle of a Bean (Include a tomato too.) • FOSS, Structures of Life, Inv. 3 Part 1,2, 3, 4 Meet the Crayfish, Crayfish Habitat, Crayfish at Home, Crayfish Territory • Life Cycle of ladybug beetles observations with Kindergarten 	<p>Short Cycle Assessment</p> <ul style="list-style-type: none"> • <i>SCA Testing Window: Apr. 1-5, 2013</i> <i>Tested TEKS: 3.9A, 3.9C, 3.9B</i> • <i>SCA Testing Window: May 6-10, 2013</i> <i>Tested TEKS: 3.10 A, 3.10B, 3.10C</i> <p>Additional Suggestions for Assessment</p> <ul style="list-style-type: none"> • Teacher observations and questioning • Descriptions of environments: living/nonliving parts • Students describe how the organisms have their needs met within that environment. • Use specimens, models, charts and diagrams to describe the flow of energy in a food chain. • Predictions of how changes to one organism in a food chain affect the entire ecosystem • cause/effect relationships in ecosystems <p>Student Interactive Notebooks and Lab Notes include:</p> <ul style="list-style-type: none"> • Labeled drawings showing structures and behaviors that help an organism survive and meet their needs in that environment • T-Chart of inherited traits and learned behavior • Diagrams and/or models of life cycles • Student comparisons of different life cycles

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- [Environments](#)

- Where Do Organisms Live?
- How Do Changes Affect Ecosystems?

Suggested Pacing: (10 days)

TEKS: 3.9A, 3.9C

Model Lesson- [Food Chains](#)

- Food Chains

Suggested Pacing (5 days)

TEKS: 3.9B

Model Lesson- [Survival](#)

- Adaptations

Suggested Pacing (4 days)

TEKS: 3.10A

Model Lesson- [Inherited Traits and Learned Behaviors](#)

- Inherited Traits and Learned Behaviors

Suggested Pacing: (5 days)

TEKS: 3.10B

Model Lesson- [Life Cycles-STC Structures of Life](#)

- FOSS: Inv. 1 Origin of Seeds
- FOSS: Inv. 2 Growing Further
- FOSS: Inv. 3 Crayfish
- Comparing Life Cycles

Suggested Pacing: (15 days)

TEKS: 3.10C

Model Lesson- [Health Lessons](#)

Suggested Pacing: (5 days)

TEKS: HE3.1A, HE3.2E, HE3.4A, HE3.6D, HE3.9A,B,D,E,F, HE 3.10A-B, HE3.11E

Model Lesson- [Accelerate to STAAR Camp \(Interventions\)](#)

Suggested Pacing: (22 days)

TEKS: 3.5C, 3.6B, 3.7B, 3.8D