Unit 3: Structures of Life

Content Area: **Science**
Course(s): **Science**
Time Period: **Marking Period 4**
Length: **Weeks**
Status: **Published**

Unit Overview

The Structures of Life Module consists of four investigations dealing with big ideas in life science—plants and animals are organisms and exhibit a variety of strategies for life, organisms are complex and have a variety of observable structures and behaviors, organisms have varied but predictable life cycles and reproduce their own kind, and individual organisms have variations in their traits that may provide an advantage in surviving in the environment. Students observe, compare, categorize, and care for a selection of organisms. Students engage in science and engineering practices to investigate structures and behaviors of the organisms and learn how some of the structures function in growth and survival. Students look at the interactions between organisms of the same kind, among organisms of different kinds, and between the environment and populations over time.

Standards

Disciplinary Core Ideas (DCI's)

SCI.3.3-LS1-1	Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.
SCI.3.3-LS2-1	Construct an argument that some animals form groups that help members survive.
SCI.3.3-LS3-1	Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.
SCI.3.3-LS3-2	Use evidence to support the explanation that traits can be influenced by the environment.
SCI.3.3-LS4-4	Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.
SCI.3.3-LS4-3	Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.
SCI.3.3-LS4-2	Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.
SCI.3.3-LS4-1	Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.

Crosscutting Concepts (CC's)

SCI.3-5.4.2	A system can be described in terms of its components and their interactions.

SCI.3-5.6.2	Substructures have shapes and parts that serve functions.
SCI.3-5.CCC.1.1	students identify similarities and differences in order to sort and classify natural objects and designed products. They identify patterns related to time, including simple rates of change and cycles, and to use these patterns to make predictions.
SCI.3-5.CCC.2.1	students routinely identify and test causal relationships and use these relationships to explain change. They understand events that occur together with regularity might or might not signify a cause and effect relationship.
SCI.3-5.CCC.3.1	students recognize natural objects and observable phenomena exist from the very small to the immensely large. They use standard units to measure and describe physical quantities such as weight, time, temperature, and volume.

Science and Engineering Practices (SEP's)

SCI.3-5.SEP.1.c	Ask questions that can be investigated and predict reasonable outcomes based on patterns such as cause and effect relationships.
SCI.3-5.SEP.2.d	Develop and/or use models to describe and/or predict phenomena.
SCI.3-5.SEP.3.a	Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence, using fair tests in which variables are controlled and the number of trials considered.
SCI.3-5.SEP.3.c	Make observations and/or measurements to produce data to serve as the basis for evidence for an explanation of a phenomenon or test a design solution.
SCI.3-5.SEP.4.a	Represent data in tables and/or various graphical displays (bar graphs, pictographs and/or pie charts) to reveal patterns that indicate relationships.
SCI.3-5.SEP.4.b	Analyze and interpret data to make sense of phenomena, using logical reasoning, mathematics, and/or computation.
SCI.3-5.SEP.5.b	Organize simple data sets to reveal patterns that suggest relationships.
SCI.3-5.SEP.6.b	Use evidence (e.g., measurements, observations, patterns) to construct or support an explanation or design a solution to a problem.
SCI.3-5.SEP.7.d	Construct and/or support an argument with evidence, data, and/or a model.
SCI.3-5.SEP.8.d	Obtain and combine information from books and/or other reliable media to explain phenomena or solutions to a design problem.

Essential Questions

Investigation 1: Origin of Seeds

- How are seeds alike and different?
- What effect does water have on seeds?
- Howmuch water does a seed soak up?
- How do seeds disperse away from the parent plant?

Investigation 2: Growing Further

- What structures does a seedling have to help it grow and survive?
- What is the sequence of the bean plant’s life cycle?

- How do the roots of schoolyard plants compare to the roots of bean plants?

Investigation 3: Meet the Crayfish

- What are the structures of a crayfish?
- How do crayfish structures and behaviors help crayfish survive?
- What kind of behavior do crayfish display in their habitat?
- How are the structures of crayfish and other animals alike and different?
- What is needed to sustain a food chain?

Investigation 4: Human Body

- What are the functions of the skeletal system?
- In what ways are the skeletons of a rodent and a human similar?
- What makes our skeletal system flexible?
- How are fingerprints alike and different?

Application of Knowledge: Students will know that…

- A seed contains the embryo plant and stores food
- A seed grows into a new plant (reproduction
- A seed is an organism, a living thing
- A skeleton is a system of interacting bones. Humans have about 206 bones. Bones have several functions: support, protection, and movement
- Crayfish have observable structures and behaviors that serve various functions in growth, survival, and reproduction.
- Difference in characteristics between individuals of the same species may provide an advantage in surviving
- Different kinds of fruits have different kinds and numbers of seeds; seeds have a variety of properties.
- Different organisms can live in different environments; organisms have adaptations that allow them to survive and reproduce in those environments
- Fingerprints can be sorted into three groups based on basic pattern: whorl, arch, and loop
- Fossils are important evidence about extinct organisms and past environments
- Germination is the onset of a seed's development
- Muscles attach across joints to move bones
- Organisms are related in feeding relationships called food chains
- Plants need water, light, space, and nutrients to grow
- Roots function to take up water and nutrients so they can be transported to other parts of the plant. Different kinds of plants have different root systems

- Seed-dispersal mechanisms (wind, water, and animals) move seeds away from parent plants
- Seeds develop in the plant part called a fruit.
- Seeds undergo changes in the presence of water
- Some animals claim a territory that they defend against others of their kind. Some organisms live in social groups that many help the individuals in the group survive
- The fruit of the plant develops from the flower
- The life cycle is the sequence of stages during which a seed grows into an adult (mature) plant and produces seeds, which in turn produce new plants of the same kind
- The number and kinds of bones in an organism are characteristics inherited from the parents of the organism

Application of Skills: Students will be able to...

- Compare the mass of dry seeds to those soaked in water.
- Describe and compare different kinds of germinated seeds.
- Design and test models of seed-dispersal mechanisms
- Investigate the effect of water on seeds.
- Monitor and record daily changes in seeds.
- Observe and compare properties of seeds and fruits
- Observe plant structures as they appear during the plant's life cycle
- Observe, analyze, and interpret observations of crayfish structures and behavior as individuals and in groups
- Plant bean seedlings in nutrient solution and observe them throughout their life cycle.
- Study skeletal systems using bones, images, and models.
- Use models to understand change over time.

Assessments

Investigation. 1: Origin of Seeds

- Formative Assessment: Science notebook entries, Performance assessment. Response sheet
- Benchmark Assessment: Investigation 1 I-Check

Investigation 2: Growing Further

- Formative Assessment: Science notebook entry, Response sheet
- Benchmark Assessment: Investigation 2 I-Check

Investigation 3: Meet the Crayfish

- Formative Assessment: Science notebook entries, Performance assessment. Response sheet
- Benchmark Assessment: Investigation 3 I-Check

Investigation 4: Human Body

- Formative Assessment: Science notebook entries, Performance assessment. Response sheet

- Benchmark Assessment: Investigation 4 I-Check

Suggested Activities

Investigation 1: Origin of Seeds

Part 1 - Seed Search

- Focus question: How are seeds alike and different?
- Search for seeds
- Sort the Seeds
- Review Vocabulary

Part 2 - The Sprouting Seed

- Focus question: What effect does water have on seeds?
- Introduce the minisprouters
- Introduce the class sprouter
- Read and discuss readings and online activites
- Share notebook entries

Part 3 - Seed Soak

- Focus question: How much water can a dry sponge soak up?
- Design an investigation
- Introduce the lima beans
- Read and discuss readings and online activites
- Share notebook entries

Part 4- Seed Dispersal

- Focus question: How do seeds disperse away from the parent plant?
- Introduce making a physical model
- Distribute action cards and define problem
- Modify seeds
- Reflect on seed disersal

Investigation 2: Growing Further

Part 1 - Germination and Growth

- Introduce germination
- Focus question: What structures does a seedling have to help it grow and survive?

- Explore germinated seeds
- Discuss functions of plant structures

Part 2 -Life Cycle of the Bean

- Focus question: What is the sequence of the bean plant's life cycle?
- Discuss other plant life cycles
- Review vocabulary

Part 3 - Roots and Shoots

- Focus question: How do the roots of schoolyard plants compare to the roots of bean plants?
- Review vocabulary
- Review focus questions

Investigation 3: Meet the Crayfish

Part 1 - Crayfish Structures

- Focus question: What are the structures of a crayfish
- Review structure and introduce functions
- Determine functions of structures
- Introduce the crayfish habitat
- Share notebook entries

Part 2 - Adaptation

- Focus question: How do crayfish structures and behaviors help crayfish survive?
- Preview the Habitat Organism cards
- Read and discuss readings and online activites
- Share notebook entries

Part 3 - Crayfish Territory

- Focus question: What kind of behavior do crayfish display in their habitat?
- Introduce Crayfish Habitat
- Identify crayfish
- Read and discuss readings and online activites
- Share notebook entries

Part 4 - Compare Crayfish to Other Animals

- Focus question: How are the structures of crayfish and other animals alike and different?
- Search for animals in the schoolyard
- Introduce the Venn diagram

Part 5 - Food Chains

- Focus question: What is needed to sustain a food chain?
- Describe the food chain activity
- Conduct round 1
- Conduct more rounds
- Read and discuss readings and online activites
- Share notebook entries

Investigation 4: Human Body

Part 1 - Counting Bones

- Focus question: What are the functions of the skeletal system?
- Focus on bones
- Discuss skeletal functions
- Read and discuss readings and online activites
- Share notebook entries

Part 2 - Owl Pellets

- Focus question: In what ways are the skeletons of a rodent and a human similar?
- Start the investigation
- Read and discuss readings and online activites
- Share notebook entries

Part 3 - Joints and Muscles

- Focus question: What makes our skeletal system flexible?
- Review hand joints
- Describe taping thumbs
- Read and discuss readings and online activites
- Share notebook entries

Part 4 - Fingerprints

- Focus question: How fingerprints alike and different?
- Practice making finger patterns
- Demonstrate carbon printing
- Make finger patterns
- Read and discuss readings and online activites
- Share notebook entries

Activities to Differentiate Instruction

Differentiation for special education:

- General modifications may include:
  - Modifications & accommodations as listed in the student's IEP
  - Assign a peer to help keep student on task
  - Modified or reduced assignments
  - Reduce length of assignment for different mode of delivery
  - Increase one-to-one time
  - Working contract between you and student at risk
  - Prioritize tasks
  - Think in concrete terms and provide hands-on-tasks
  - Position student near helping peer or have quick access to teacher
  - Anticipate where needs will be
  - Break tests down in smaller increments
  - More time with the active investigations or online activities.
  - More experience building explanations of the science concepts orally or in writing or drawing
  - Making vocabulary more explicit through new concrete experiences orthrough reading to students.
  - Scaffolding their thinking through graphic organizers.
  - Designing individual projects or small-group investigations.
  - More opportunities for experiencing science outside the classroom in more natural, outdoor environments.
  - Interdisciplinary extensions at the end of each investigation

Differentiation for ELL's:

- General modifications may include:
  - Strategy groups
  - Teacher conferences
  - Graphic organizers
  - Modification plan
  - Collaboration with ELL Teacher
- Content specific vocabulary important for ELL students to understand include: compete, cotyledon, disperse, dormant, embryo, Engineer, estimate, fruit, function, Living, modify, Observe, organism, parent plant, Pattern, Physical model, predict, property, protect, reproduce, seed, seed coat, structure, surviveadult, fibrous root, flower, germination, growth, hydroponics, Inherit, leaf, life cycle, nutrient, root, seedling, shoot, stem, taprootadaptation, antenna, appendage, behavior, carapace, carnivore, crayfish, crustacean, elodea, Energy, environment, female, food chain, Genus, habitat, herbivore, malemolt, offspring, omnivore, pincer, population, predator, prey, Protective coloration, Species, Stable system, sustain, sustainable, swimmeret, System, territory, Trait, Variation, Arch, Articulated, Ball-and-socket joint, Bone, Characteristic, Contract, Fingerprint, Fossil, Gliding joint, Hinge joint, Joint, Loop, Movement, Muscle, Opposable thumb, Pattern, Protection, Skeletal muscle, Skeletal system, Skeleton, Skull, Support, Tendon, Tissue. Torso, Whorl

Differentiation to extend learning for gifted students may include:

Investigation 1 - Determine the mass of multiple seeds, Problem of the week, Determine the mass of multiple seeds, Research fruit in grocery stores, Make seed art , Play Seed-Go, Drag and plant an old sock, Plant seeds in soil, Hold a sprout taste test

Investigation 2 - Write a book on germination, Engage your memory, Problem of the week, Research staple crops around the world, Take home hydroponics, Explore other conditions for growth, Compare flower structures, Compare plants grown in soil, Find out about pollination

Investigation 3 - Plan crayfish presentations, Create and tell crayfish territorial stories, Write about a day in the life of a crayfish, Problem of the week, Compare the mass of crayfish, Measure the amount a crayfish eats, Investigate crayfish food preferences, Investigate crayfish territories, Match Habitat Organism cards, Investigate water breathers

Investigation 4 - Make a bone-facts class book, Practice using scientific bone names, Research other skeletons, Research artificial joints and limbs, Research muscles in space, Problem of the week, Determine the mass of multiple seeds, Build a model thumb, Study X-rays, Research articulated machines, Examine a chicken wing, Add extensor muscles to the models, Create action figures, Keep an exercise journal, Research injuries, Research cramps

Integrated/Cross-Disciplinary Instruction

Technology

Investigation 3, Part 2: Adaptation

"Walking Stick Survival" simulation

Investigation 3, Part 4: Compare Crayfish to Other Animals

"Where Does It Live?"

"What Doesn't Belong?"

"Habitat Gallery

"Organism Match"

“Crayfish vs. Snail vs. Mantis”

“Life Cycles”

Investigation 4, Part 1: Counting Bones

“Mr. Bones” puzzle

Interdisciplinary Extensions

Investigation 1:

Language Extension - Determine the mass of multiple seeds

Mathematics Extension - Problem of the week, Determine the mass of multiple seeds

Social Studies Extension - Research fruit in grocery stores

Art Extension - Make seed art

Science Extensions - Play Seed-Go, Drag and plant an old sock, Plant seeds in soil, Hold a sprout taste test

Investigation 2:

Language Extension - Write a book on germination, Engage your memory

Mathematics Extension - Problem of the week

Social Studies Extension - Research staple crops around the world

Science Extensions - Take home hydroponics, Explore other conditions for growth, Compare flower structures, Compare plants grown in soil, Find out about pollination

Investigation 3:

Language Extension - Plan crayfish presentations, Create and tell crayfish territorial stories, Write about a day

in the life of a crayfish

Mathematics Extension - Problem of the week, Compare the mass of crayfish, Measure the amount a crayfish eats

Science Extensions - Investigate crayfish food preferences, Investigate crayfish territories, Match Habitat Organism cards, Investigate water breathers

Investigation 4:

Language Extension - Make a bone-facts class book, Practice using scientific bone names, Research other skeletons, Research artificial joints and limbs, Research muscles in space

Mathematics Extension - Problem of the week, Determine the mass of multiple seeds

Science Extensions - Build a model thumb, Study X-rays, Research articulated machines, Examine a chicken wing, Add extensor muscles to the models

Art Extension - Create action figures

Physical Education Extensions - Keep an exercise journal, Research injuries, Research cramps

LA.RI.3.1	Ask and answer questions, and make relevant connections to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
LA.RI.3.2	Determine the main idea of a text; recount the key details and explain how they support the main idea.
LA.RI.3.3	Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.
LA.RI.3.5	Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.
LA.RI.3.7	Use information gained from text features (e.g., illustrations, maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).
LA.RF.3.4	Read with sufficient accuracy and fluency to support comprehension.
LA.K-12.NJSLSA.SL2	Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
LA.K-12.NJSLSA.SL3	Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.
LA.RF.3.4.C	Use context to confirm or self-correct word recognition and understanding, rereading as

	necessary.
LA.K-12.NJSLSA.L5	Demonstrate understanding of word relationships and nuances in word meanings.
LA.K-12.NJSLSA.L6	Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.
LA.W.3.5	With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.
LA.W.3.8	Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.
LA.SL.3.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
LA.SL.3.4	Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.
LA.SL.3.6	Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.
LA.L.3.4.D	Use glossaries or beginning dictionaries, both print and digital, to determine or clarify the precise meaning of key words and phrases.

Resources

www.FOSSweb.om - Teacher-user account

Investigation 1:

Science Resources Book

"The Reason for Fruit"

"The Most Important Seed"

"Barbara McClintock"

"Nature Journal—How Seeds Travel"

Video

How Seeds Get Here . . . and There

Investigation 2:

Science Resources Book

"Germination"

“Life Cycles”

Videos

How Plants Get Food

All about Animal Life Cycles

Investigation 3:

Science Resources Book

“Crayfish”

“Adaptations”

“Life on Earth”

“Inside a Snail’s Shell” (optional)

“A Change in the Environment”

“Food Chains”

Videos

All about Animal Adaptations

All about Animal Behavior and Communication

Online Activities

“Walking Stick Survival”

“Life Cycles”

“Crayfish vs. Snail vs. Mantis”

“Where Does It Live?

“What Doesn’t Belong?”

“Habitat Gallery”

“Organism Match”

Investigation 4:

Science Resources Book

“The Human Skeleton”

“Barn Owls”

“Fossils”

“Skeletons on the Outside”

“Crayfish, Snails, and Humans”

“Your Amazing Opposable

Thumbs”

“Joints and Muscles”

“Fingerprints”

“Supertwins”

Video

All about Fossils

Online Activity

“Mr. Bones

Websites

All About Snails
URL: www.kiddyhouse.comDescription: This site includes information about the snail, coloring activities, worksheets, clip art, stories and Internet-based lesson.

Bill Nye's Online Labs
URL: www.billnye.comDescription: This site contains Bill Nye the Science Guy's online labs which contain chemistry experiments.

Biology4Kids.com
URL: www.biology4kids.comDescription: Examines xylem and phloem. User friendly, includes slides.

Calflora: A Botanical Resource For California On The Internet
URL: www.calflora.orgDescription: Search plants found in California. Nonnatives are included here, too.

California Carnivores
URL: www.californiacarnivores.comDescription: Everything you ever wanted to know about carnivorous plants.

Crayfish Species by Geographic Region
URL: iz.carnegiemnh.orgDescription: This site lists native species of crayfish by region. Click on the map of the United States and your state to learn about the crayfish of your region.

Delaware Water Gap National Recreation Area
URL: www.nps.govDescription: The home page for the Delaware Water Gap National Recreation Area, sponsored by the National Park Service.

Desert USA
URL: desertusa.comDescription: A guide to the deserts of the southwestern United States. Information about the ecosystems and land use.

ENature
URL: www.enature.comDescription: This site features complete field guides to animals and plants. The regional search feature allows you to find species in your region.

ESPECIES Animal Fact Sheets
URL: www.kidsplanet.orgDescription: Electronic facts sheets on over 50 endangered species.

Growing a Pineapple
URL: aggie-horticulture.tamu.eduDescription: Getting a pineapple top to take root is no mystery once you follow these instructions.

How Wolves Communicate
URL: www.units.muohio.eduDescription: Explores communication among wolves.

I Was Wondering: Women's Adventures in Science
URL: Description: This project of the National Academy of Sciences showcases the accomplishments of contemporary women in science and highlights the varied and intriguing careers of some of today's most prominent scientists.

Insect Answers
URL: insects.tamu.eduDescription: Frequently asked questions and information about common household, lawn and garden, and agriculture pests. The site includes an identification key and field guide to common insects. Although the focus is on insects found in Texas, this is still a valuable source of information.

Kid's Corner
URL: education.usgs.govDescription: Explore the USGS Biological Resources Division for kids.

Kiddy House
URL: www.kiddyhouse.comDescription: Stories, crafts, and information on frogs, farms, and snails are just a few of the offerings at this site for parents, kids, and teachers. The All About Snails site includes information about land and pond snails, activities, and worksheets.

Kidsgardening
URL: www.kidsgardening.comDescription: The National Gardening Association provides parents and educators with ideas, resources, and information. Check here for grants for school garden projects. Primary students may need some adult assistance with this site.

KinderGarden
URL: aggie-horticulture.tamu.eduDescription: This site includes information and resources for growing and maintaining school gardens plus information about botanic and community gardens.

La Brea Tar Pits
URL: www.ucmp.berkeley.eduDescription: A description of the La Bea tar pits in Los Angeles, from the University of California Museum of Paleontology.

Live Owl Cam
URL: www.owlcam.comDescription: NULL

Mono Lake
URL: www.monolake.orgDescription: Mono Lake website sponsored by the Mono Lake Committee.

Monterey Bay National Marine Sanctuary
URL: montereybay.nos.noaa.govDescription: Home page for the Monterey Bay National Marine Sanctuary.

Museum of Paleontology
URL: www.ucmp.berkeley.eduDescription: The University of California Museum of Paleontology. Explore what's new at the museum, its collections, exhibits, and programs, learn more about evolution, or follow the link to paleoportal.org to view a fossil gallery or explore paleontology in the U.S. by state and time period.

National Gardening Association
URL: www.kidsgardening.orgDescription: Information about home gardening.

National Park Service, Threatened And Endangered Species
URL: www.nature.nps.govDescription: Links to lists of endangered species in North America and national parks. Also links to articles on restoration and protection efforts for the National Park Service and U.S. Fish and Wildlife Service.

NOAA's Ark
URL: www.photolib.noaa.govDescription: This collection of images from the National Oceanic and Atmospheric Administration (NOAA) includes many wonderful pictures of both land- and ocean-dwelling creatures, including bears, whales, birds, and walruses.

Raising Snails
URL: www.nal.usda.govDescription: USDA site explaining how to commercially raise snails, and lots of other information about snails in general.

Roots
URL: www.backyardnature.netDescription: Learn all about roots.

Saguaro National Park
URL: www.nps.govDescription: Home page for the Saguaro National Park, sponsored by the National Park Service.

Save Our Species
URL: www.epa.govDescription: Pictures and facts about some of the endangered plants and animals in the United States, including why they are endangered.

Seed Dispersal

URL: www.mbgnet.netDescription: This site includes examples of five trees and how they disperse their seeds. Includes student experiments. Primary students may need adult assistance with this site.

The Art of Camouflage
URL: artwolfe.photoshelter.comDescription: Learn more about animal camouflage. Includes a project about protective coloration in animals.

The Great Plant Escape
URL: www.urbanext.uiuc.eduDescription: Help Detective Leplant and his partners unlock the amazing mysteries of plant life. Sponsored by the University of Illinois Extension Program. Includes a Spanish version. Young students may need help with reading the text.

The La Brea Exploration Guide
URL: www.tarpits.orgDescription: The website for the La Brea tar pits in Los Angeles. Explore how the tar pits formed, what types of plants and animals became trapped, and how scientists have used these fossil deposits to open a window into the world of prehistoric Los Angeles.

Tryscience.org Field Trips
URL: www.tryscience.orgDescription: Find out about more than 400 science and technology centers and museums worldwide. Use an interactive map of the world to find and explore a science and technology center or museum near you. You can also find online adventures and field trips, ideas for experiments at home, plus live webcams. TryScience.org is your gateway to experience the excitement of contemporary science and technology through on and offline interactivity with science and technology centers worldwide. TryScience is brought to you through a partnership between IBM Corporation, the New York Hall of Science (NYHOS), the Association of Science-Technology Centers (ASTC), and science centers worldwide.
What is a Sabertooth?

URL: www.ucmp.berkeley.eduDescription: A description of two different saber-toothed cats, from the University of California Museum of Paleontology.

Wonderwise: Women in Science Learning Series
URL: wonderwise.unl.eduDescription: Introduces you to women who have made science their career. You can take several field trips, including space geology, African plant exploration, and urban ecology.

USGS Science Education Website
URL: www.usgs.govDescription: Explore things on, in, around, and about Earth, such as plants and animals, land, water, and maps. Shows how biology, geology, hydrology, and geography help us understand our changing world.

21st Century Skills

CRP.K-12.CRP1	Act as a responsible and contributing citizen and employee.
CRP.K-12.CRP2	Apply appropriate academic and technical skills.
CRP.K-12.CRP3	Attend to personal health and financial well-being.
CRP.K-12.CRP4	Communicate clearly and effectively and with reason.
CRP.K-12.CRP5	Consider the environmental, social and economic impacts of decisions.
CRP.K-12.CRP6	Demonstrate creativity and innovation.

CRP.K-12.CRP7	Employ valid and reliable research strategies.
CRP.K-12.CRP8	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP.K-12.CRP9	Model integrity, ethical leadership and effective management.
CRP.K-12.CRP10	Plan education and career paths aligned to personal goals.
CRP.K-12.CRP11	Use technology to enhance productivity.
CRP.K-12.CRP12	Work productively in teams while using cultural global competence.