5th Grade - Elementary Science Bundle # 9

Title	Suggested Dates
Structures and Functions of Organisms	2/22/10 – 3/12/10 (15 days)

Big Idea/Enduring Understanding	Guiding Questions
Organisms undergo similar life processes and have structures that help them survive within their environments.	What are "adaptive characteristics" and what purpose do they serve? Do all organisms have "adaptive characteristics"? What is the difference between inherited traits and learned behaviors? What patterns in the natural world provide evidence of inherited traits?

The resources included here provide teaching examples and/or meaningful learning experiences to address the District Curriculum. In order to address the TEKS to the proper depth and complexity, teachers are encouraged to use resources to the degree that they are congruent with the TEKS and research-based best practices. Teaching using only the suggested resources does not guarantee student mastery of all standards. Teachers must use professional judgment to select among these and/or other resources to teach the district curriculum.

Knowledge & Skills with Student Expectations	District Specificity/Examples	Suggested Resources (See note above)
This Bundle Will Be Updated.		
CURRENT TEKS **5.9 Science concepts. The student knows that adaptations may increase the survival of members of a species.** 5.9a compare the adaptive characteristics of species that improve their ability to survive and reproduce in an ecosystem 5.9b analyze and describe adaptive characteristics that result in an organism's unique niche in an ecosystem 5.9c predict some adaptive characteristics required for survival and reproduction by an organism in an ecosystem NEW TEKS **5.10 Organisms and Environments. The student knows that organisms undergo similar life processes and have structures that help them survive within their environments.**		

5.10a compare the structures and functions of different species that help them live and survive such as hooves on prairie animals or webbed feet in aquatic animals		
CURRENT TEKS **5.10 Science concepts. The student knows that likenesses between offspring and parents can be inherited or learned.** 5.10a identify traits that are inherited from parent to offspring in plants and animals 5.10b give examples of learned characteristics that result from the influence of the environment NEW TEKS **5.10 Organisms and Environments. The student knows that organisms undergo similar life processes and have structures that help them survive within their environments.** 5.10b differentiate between inherited traits of plants and animals such as spines on a cactus or shape of a beak and learned behaviors such as an animal learning tricks or a child riding a bicycle		
CURRENT TEKS **5.6 Science concepts. The student knows that some change occurs in cycles.** 5.6c describe and compare life cycles of plants and animals NEW TEKS **5.10 Organisms and Environments. The student knows that organisms undergo similar life processes and have structures that help them survive within their environments.** 5.10c describe the differences between		

complete and incomplete metamorphosis of insects		
CURRENT TEKS **5.1 Scientific Processes. The student conducts field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices.** 5.1a demonstrate safe practices during field and laboratory investigations 5.1b make wise choices in the use and conservation of resources and the disposal or recycling of materials NEW TEKS **5.1 Scientific investigations and reasoning. The student conducts classroom and outdoor investigations following home and school safety procedures and environmentally appropriate and ethical practices.** 5.1a demonstrate safe practices and the use of safety equipment as described in the Texas Safety Standards during classroom and outdoor investigations 5.1b make informed choices in the conservation, disposal, and recycling of materials		
CURRENT TEKS **5.2 Scientific processes. The student uses scientific methods during field and laboratory investigations.** 5.2a plan and implement descriptive and simple experimental investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology		

5.2b collect information by observing and measuring 5.2c analyze and interpret information to construct reasonable explanations from direct and indirect evidence 5.2d communicate valid conclusions 5.2e construct simple graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate information NEW TEKS **5.2 Scientific investigations and reasoning. The student uses scientific methods during laboratory and outdoor investigations.** 5.2a describe, plan, and implement simple experimental investigations testing one variable 5.2b ask well-defined questions, formulate testable hypothesis, and select and use appropriate equipment and technology 5.2c collect information by detailed observation and accurate measuring 5.2d analyze and interpret information to construct reasonable explanations from direct (observable) and indirect (inferred) evidence 5.2e demonstrate that repeated investigations may increase the reliability of results 5.2f communicate valid conclusions in both written and verbal forms 5.2g construct appropriate simple graphs, tables, maps, and charts using technology, including computers, to organize, examine, and evaluate information		

CURRENT TEKS **5.3 Scientific Processes. The student uses critical thinking and scientific problem solving to make informed decisions.** 5.3a analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information 5.3b draw inferences based on information related to promotional materials for products and services 5.3c represent the natural world using models and identify their limitations 5.3d evaluate the impact of research on scientific thought, society, and the environment 5.3e connect Grade 5 science concepts with the history of science and contributions of scientists NEW TEKS **5.3 Scientific investigation and reasoning. The student uses critical thinking and scientific problem solving to make informed decisions.** 5.3a in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations so as to encourage critical thinking by the student 5.3b evaluate the accuracy of the information related to promotional materials for products and services such as nutritional labels		

5.3c draw or develop a model that represents how something works or looks that cannot be seen such as how a soda dispensing machine works 5.3d connect grade level appropriate science concepts with the history of science, science careers, and contributions of scientists		
CURRENT TEKS **5.4 Scientific Processes. The student knows how to use a variety of tools and methods to conduct science inquiry.** 5.4a collect and analyze information using tools including calculators, microscopes, cameras, sound recorders, computers, and lenses, rulers, thermometers, compasses, balances, hot plates, meter sticks, timing devices, magnets, collecting nets, and safety goggles 5.4b demonstrate that repeated investigations may increase the reliability of results NEW TEKS **5.4 Scientific investigation and reasoning. The student knows how to use a variety of tools and methods to conduct science inquiry.** 5.4a collect, record, and analyze information using tools including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, prisms, mirrors, pan balances, triple beam balances, spring scales, graduated cylinders, beakers, hot plates, meter sticks, magnets, collecting nets, and notebooks; timing devices including clocks and stopwatches, and materials to support the observation of habitats of organisms such as terrariums and aquariums		

5.4b use safety equipment including safety goggles and gloves		