

LIFE SCIENCE DAYBOOK

Grades 6-8

correlated to

Texas

Essential Knowledge and Skills (TEKS) for Science



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correlated to
Texas Essential Knowledge and Skills (TEKS)
for Science
Grade 6

(1) S c i e n t i f i c p r o c e s s e s

The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices.

Knowledge and Skills, Grade 6	Life SCIENCE DAYBOOK
The student is expected to: (A) demonstrate safe practices during field and laboratory investigations; and	Teacher's Guide: 10A, 20A, 30A, 52A, 72A, 94A, 124A, 132, 136A, 146A, 148, 156A, 166A, 198A, 208A
(B) make wise choices in the use and conservation of resources and the disposal or recycling of materials.	Teacher's Guide: 156B

(2) S c i e n t i f i c p r o c e s s e s

The student uses scientific inquiry methods during field and laboratory investigations.

Knowledge and Skills, Grade 6	Life SCIENCE DAYBOOK
The student is expected to: (A) plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology;	Teacher's Guide: 24, 94, 95-96, 102-103, 124, 126-127, 129, 144-145, 173, 188, 190-191, 220
(B) collect data by observing and measuring;	Teacher's Guide: 10, 12, 13, 24, 26-27, 48-49, 54, 55, 64, 91, 114, 117, 118, 120, 122-123, 132-133, 140-141, 146, 148-149, 150, 154-155, 162, 164, 214, 216
(C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence;	Teacher's Guide: 9B, 10, 11, 13, 22-23, 24-27, 34-37, 60, 71, 101, 121, 136-139, 146-149, 162-165, 166-169, 191, 197, 204-205, 210
(D) communicate valid conclusions; and	Teacher's Guide: 9B, 10, 11, 13, 23, 27, 37, 60, 71, 101, 121, 139, 149, 165, 169, 191, 197, 205, 210

Knowledge and Skills, Grade 6	Life SCIENCE DAYBOOK
(E) construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data.	Teacher's Guide: 13, 29, 35, 37, 41, 48, 49, 58, 71, 81, 82, 84, 86-87, 100, 101, 107, 109, 110, 118, 124, 126-127, 128, 131, 136, 138, 139, 144, 147, 150, 151, 152, 159, 162, 164, 167, 168, 171, 183, 187, 196, 198, 200, 201, 204, 208, 209, 210, 211, 212, 213, 218

(3) S c i e n t i f i c p r o c e s s e s

The student uses critical thinking and scientific problem solving to make informed decisions.

Knowledge and Skills, Grade 6	Life SCIENCE DAYBOOK
The student is expected to: (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;	Teacher's Guide: 86-89, 136-139, 159, 168-169
(C) represent the natural world using models and identify their limitations;	Teacher's Guide: 9B, 10, 11, 21, 25, 30, 32, 34, 36-37, 53, 76, 78-79, 98, 100, 104-107, 132-133, 140, 148-149, 188
(D) evaluate the impact of research on scientific thought, society, and the environment; and	Teacher's Guide: 18-19, 76-79, 166-169, 172-175, 212-213
(E) connect Grade 6 science concepts with the history of science and contributions of scientists.	Teacher's Guide: 8, 16, 18-19, 54-57, 166-169

(4) S c i e n t i f i c p r o c e s s e s

The student knows how to use a variety of tools and methods to conduct science inquiry.

Knowledge and Skills, Grade 6	Life SCIENCE DAYBOOK
The student is expected to: (A) collect, analyze, and record information using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, timing devices, hot plates, test tubes, safety goggles, spring scales, magnets, balances, microscopes, telescopes, thermometers, calculators, field equipment, compasses, computers, and computer probes.	Teacher's Guide: 10B, 20B, 24, 25, 40B, 41, 82B, 94B, 94, 95-96, 102-103, 124, 126-127, 129, 144-145, 173, 188B, 188, 190-191, 193, 198B, 220

(5) Scientific concepts

The student knows that systems may combine with other systems to form a larger system.

Knowledge and Skills, Grade 6	Life SCIENCE DAYBOOK
The student is expected to: (A) identify and describe a system that results from the combination of two or more systems such as in the solar system; and	Teacher's Guide: 10-13, 14-17, 48-49, 82-85, 86-89, 90-91, 124-128, 170-171, 172-175, 178-181, 182-185, 192-195
(B) describe how the properties of a system are different from the properties of its parts.	Teacher's Guide: 10-13, 14-17, 48-49, 82-85, 86-89, 90-91, 124-128, 170-171, 172-175, 178-181, 182-185, 192-195

(8) Science concepts

The student knows that complex interactions occur between matter and energy.

Knowledge and Skills, Grade 6	Life SCIENCE DAYBOOK
The student is expected to: (A) define matter and energy;	Teacher's Guide: 15, 17, 20-22, 24-25, 28, 48, 49, 108-109, 146, 202, 220
(C) describe energy flow in living systems including food chains and food webs.	Teacher's Guide: 75, 182, 188-189, 192, 196, 204, 220

(10) Science concepts

The student knows the relationship between structure and function in living systems.

Knowledge and Skills, Grade 6	Life SCIENCE DAYBOOK
The student is expected to: (A) differentiate between structure and function;	Teacher's Guide: 10-13, 14-17, 18-19, 20-23, 24-27, 28-29, 30-33, 34-37, 38-39, 40-43, 44-47, 48-49, 52-53, 54-57, 58-61, 72-75, 80-81, 102-103, 104-107, 108-109, 110-113, 124-127, 128-131, 132-133, 136-139, 142-145, 146-149, 150-153, 154-155, 156-157, 158-162, 162-165, 198-201, 202-205
(B) determine that all organisms are composed of cells that carry on functions to sustain life; and	Teacher's Guide: 10-13, 14, 15, 16, 17, 18, 19, 20, 24-25, 28, 30, 31, 32, 33, 34, 35, 36, 37, 38-39, 40, 41, 42, 43, 45-47, 150, 154, 218, 220
(C) identify how structure complements function at different levels of organization including organs, organ systems, organisms, and populations.	Teacher's Guide: 10-13, 14-17, 18-19, 20-23, 24-27, 28-29, 30-33, 34-37, 38-39, 40-43, 44-47, 48-49, 52-53, 54-57, 58-61, 72-75, 80-81, 102-103, 104-107, 108-109, 110-113, 124-127, 128-131, 132-133, 136-139, 142-145, 146-149, 150-153, 154-155, 156-157, 158-162, 162-165, 198-201, 202-205

(1 1) S c i e n c e c o n c e p t s

The student knows that traits of species can change through generations and that the instructions for traits are contained in the genetic material of the organisms.

Knowledge and Skills, Grade 6	Life SCIENCE DAYBOOK
The student is expected to: (A) identify some changes in traits that can occur over several generations through natural occurrence and selective breeding;	Teacher's Guide: 18-19, 52-53, 68, 221
(B) identify cells as structures containing genetic material; and	Teacher's Guide: 18-19
(C) interpret the role of genes in inheritance.	Teacher's Guide: 18-19, 52-53, 68, 221

(1 2) S c i e n c e c o n c e p t s

The student knows that the responses of organisms are caused by internal or external stimuli.

Knowledge and Skills, Grade 6	Life SCIENCE DAYBOOK
The student is expected to: (C) identify components of an ecosystem to which organisms may respond.	Teacher's Guide: 178-181, 192-194, 196-197, 220



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Grade 7

(1) Scientific processes

The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices.

Knowledge and Skills, Grade 7	Life SCIENCE DAYBOOK
The student is expected to: (A) demonstrate safe practices during field and laboratory investigations; and	Teacher's Guide: 10A, 20A, 30A, 52A, 72A, 94A, 124A, 132, 136A, 146A, 148, 156A, 166A, 198A, 208A
(B) make wise choices in the use and conservation of resources and the disposal or recycling of materials.	Teacher's Guide: 156B

(2) Scientific processes

The student uses scientific inquiry methods during field and laboratory investigations.

Knowledge and Skills, Grade 7	Life SCIENCE DAYBOOK
The student is expected to: (A) plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology;	Teacher's Guide: 24, 94, 95-96, 102-103, 124, 126-127, 129, 144-145, 173, 188, 190-191, 220
(B) collect data by observing and measuring;	Teacher's Guide: 10, 12, 13, 24, 26-27, 48-49, 54, 55, 64, 91, 114, 117, 118, 120, 122-123, 132-133, 140-141, 146, 148-149, 150, 154-155, 162, 164, 214, 216

Knowledge and Skills, Grade 7	Life SCIENCE DAYBOOK
(C) organize, analyze, make inferences, and predict trends from direct and indirect evidence;	Teacher's Guide: 10, 14, 18, 20, 40, 43, 44, 47, 49, 58, 63, 67, 68, 72, 75, 77, 79, 82, 85, 87, 94, 97, 98, 101, 104, 105, 108-109, 110, 112, 114, 116-117, 118-119, 121, 122, 123, 124, 127, 128, 130, 137, 139, 141, 142, 143, 145, 146, 150, 153, 154-155, 156-157, 162, 165, 169, 178, 180, 182, 186, 187, 188, 191, 192, 194, 195, 196, 197, 198, 200, 202, 204, 205, 206, 208, 212, 217, 223
(D) communicate valid conclusions; and	Teacher's Guide: 9B, 10, 11, 13, 23, 27, 37, 60, 71, 101, 121, 139, 149, 165, 169, 191, 197, 205, 210
(E) construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data.	Teacher's Guide: 13, 29, 35, 37, 41, 48, 49, 58, 71, 81, 82, 84, 86-87, 100, 101, 107, 109, 110, 118, 124, 126-127, 128, 131, 136, 138, 139, 144, 147, 150, 151, 152, 159, 162, 164, 167, 168, 171, 183, 187, 196, 198, 200, 201, 204, 208, 209, 210, 211, 212, 213, 218

(3) S c i e n t i f i c p r o c e s s e s

The student uses critical thinking and scientific problem solving to make informed decisions.

Knowledge and Skills, Grade 7	Life SCIENCE DAYBOOK
The student is expected to: (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;	Teacher's Guide: 86-89, 136-139, 159, 168-169
(C) represent the natural world using models and identify their limitations;	Teacher's Guide: : 9B, 10, 11, 21, 25, 30, 32, 34, 36-37, 53, 76, 78-79, 98, 100, 104-107, 132-133, 140, 148-149, 188
(D) evaluate the impact of research on scientific thought, society, and the environment; and	Teacher's Guide: 18-19, 76-79, 166-169, 172-175, 212-213
(E) connect Grade 7 science concepts with the history of science and contributions of scientists.	Teacher's Guide: 8, 16, 18-19, 54-57, 166-169

(4) S c i e n t i f i c p r o c e s s e s

The student knows how to use tools and methods to conduct science inquiry.

Knowledge and Skills, Grade 7	Life SCIENCE DAYBOOK
The student is expected to: (A) collect, analyze, and record information to explain a phenomenon using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, hot plates, dissecting equipment, test tubes, safety goggles, spring scales, balances, microscopes, telescopes, thermometers, calculators, field equipment, computers, computer probes, timing devices, magnets, and compasses.	Teacher's Guide: 10B, 20B, 24, 25, 40B, 41, 82B, 94B, 94, 95-96, 102-103, 124, 126-127, 129, 144-145, 173, 188B, 188, 190-191, 193, 198B, 220

(6) S c i e n c e c o n c e p t s

The student knows that there is a relationship between force and motion.

Knowledge and Skills, Grade 7	Life SCIENCE DAYBOOK
The student is expected to: (C) relate forces to basic processes in living organisms including the flow of blood and the emergence of seedlings.	Teacher's Guide: 58, 59, 150-151

(8) S c i e n c e c o n c e p t s

The student knows that complex interactions occur between matter and energy.

Knowledge and Skills, Grade 7	Life SCIENCE DAYBOOK
The student is expected to: (B) identify that radiant energy from the Sun is transferred into chemical energy through the process of photosynthesis.	Teacher's Guide: 24-25, 27, 28, 188, 223

(9) S c i e n c e c o n c e p t s

The student knows the relationship between structure and function in living systems.

Knowledge and Skills, Grade 7	Life SCIENCE DAYBOOK
The student is expected to: (A) identify the systems of the human organism and describe their functions.	Teacher's Guide: 10-13, 14-17, 18-19, 20-23, 24-27, 28-29, 30-33, 34-37, 38-39, 40-43, 44-47, 48-49, 52-53, 54-57, 58-61, 72-75, 80-81, 102-103, 104-107, 108-109, 110-113, 124-127, 128-131, 132-133, 136-139, 142-145, 146-149, 150-153, 154-155, 156-157, 158-162, 162-165, 198-201, 202-205

(1 0) Science concepts

The student knows that species can change through generations and that the instructions for traits are contained in the genetic material of the organisms.

Knowledge and Skills, Grade 7	Life SCIENCE DAYBOOK
The student is expected to: (A) identify that sexual reproduction results in more diverse offspring and asexual reproduction results in more uniform offspring;	Teacher's Guide: 18-19, 30-33, 52-53, 54-57, 58-61, 62-63, 64-67, 68-71, 72-75, 76-79, 124-127, 132-133, 178-181, 182-185, 198-199, 223
 (B) compare traits of organisms of different species that enhance their survival and reproduction; and	Teacher's Guide: 72A, 72B, 72-75, 76-79, 80-81, 124A, 124B, 124-127, 128-131, 132-133, 198A, 198B, 198-201
 (C) distinguish between dominant and recessive traits and recognize that inherited traits of an individual are contained in genetic material.	Teacher's Guide: 57, 59, 62-63, 64-67, 77-79, 219, 223

(1 1) Science concepts

The student knows that the responses of organisms are caused by internal or external stimuli.

Knowledge and Skills, Grade 7	Life SCIENCE DAYBOOK
The student is expected to: (A) analyze changes in organisms such as a fever or vomiting that may result from internal stimuli.	Teacher's Guide: 170-171, 172-173

(1 2) Science concepts

The student knows that there is a relationship between organisms and the environment.

Knowledge and Skills, Grade 7	Life SCIENCE DAYBOOK
The student is expected to: (A) identify components of an ecosystem;	Teacher's Guide: 178-181, 192-194, 196-197, 220
 (B) observe and describe how organisms including producers, consumers, and decomposers live together in an environment and use existing resources;	Teacher's Guide: 188, 189, 223
 (C) describe how different environments support different varieties of organisms.	Teacher's Guide: 198A, 198B, 198-201

(1 4) S c i e n c e c o n c e p t s

The student knows that natural events and human activity can alter Earth systems.

Knowledge and Skills, Grade 7	Life SCIENCE DAYBOOK
The student is expected to: (C) make inferences and draw conclusions about effects of human activity on Earth's renewable, non-renewable, and inexhaustible resources.	Teacher's Guide: 196-197, 206-207, 212-213



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Grade 8

(1) S c i e n t i f i c p r o c e s s e s

The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices.

Knowledge and Skills, Grade 8	Life SCIENCE DAYBOOK
The student is expected to: (A) demonstrate safe practices during field and laboratory investigations; and	Teacher's Guide: : 10A, 20A, 30A, 52A, 72A, 94A, 124A, 132, 136A, 146A, 148, 156A, 166A, 198A, 208A
(B) make wise choices in the use and conservation of resources and the disposal or recycling of materials.	Teacher's Guide: 156B

(2) S c i e n t i f i c p r o c e s s e s

The student uses scientific inquiry methods during field and laboratory investigations.

Knowledge and Skills, Grade 8	Life SCIENCE DAYBOOK
The student is expected to: (A) plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology;	Teacher's Guide: 24, 94, 95-96, 102-103, 124, 126-127, 129, 144-145, 173, 188, 190-191, 220
(B) collect data by observing and measuring;	Teacher's Guide: 10, 12, 13, 24, 26-27, 48-49, 54, 55, 64, 91, 114, 117, 118, 120, 122-123, 132-133, 140-141, 146, 148-149, 150, 154-155, 162, 164, 214, 216
(C) organize, analyze, evaluate, make inferences, and predict trends from direct and indirect evidence;	Teacher's Guide: 10, 14, 18, 20, 40, 43, 44, 47, 49, 58, 63, 67, 68, 72, 75, 77, 79, 82, 85, 87, 94, 97, 98, 101, 104, 105, 108-109, 110, 112, 114, 116-117, 118-119, 121, 122, 123, 124, 127, 128, 130, 137, 139, 141, 142, 143, 145, 146, 150, 153, 154-155, 156-157, 162, 165, 169, 178, 180, 182, 186, 187, 188, 191, 192, 194, 195, 196, 197, 198, 200, 202, 204, 205, 206, 208, 212, 217, 223

Knowledge and Skills, Grade 8	Life SCIENCE DAYBOOK
(D) communicate valid conclusions; and	Teacher's Guide: 9B, 10, 11, 13, 23, 27, 37, 60, 71, 101, 121, 139, 149, 165, 169, 191, 197, 205, 210
(E) construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data.	Teacher's Guide: 13, 29, 35, 37, 41, 48, 49, 58, 71, 81, 82, 84, 86-87, 100, 101, 107, 109, 110, 118, 124, 126-127, 128, 131, 136, 138, 139, 144, 147, 150, 151, 152, 159, 162, 164, 167, 168, 171, 183, 187, 196, 198, 200, 201, 204, 208, 209, 210, 211, 212, 213, 218

(3) S c i e n t i f i c p r o c e s s e s

The student uses critical thinking and scientific problem solving to make informed decisions.

Knowledge and Skills, Grade 8	Life SCIENCE DAYBOOK
The student is expected to:	Teacher's Guide: 86-89, 136-139, 159, 168-169
(A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;	
(C) represent the natural world using models and identify their limitations;	Teacher's Guide: 9B, 10, 11, 21, 25, 30, 32, 34, 36-37, 53, 76, 78-79, 98, 100, 104-107, 132-133, 140, 148-149, 188
(D) evaluate the impact of research on scientific thought, society, and the environment; and	Teacher's Guide: 18-19, 76-79, 166-169, 172-175, 212-213
(E) connect Grade 8 science concepts with the history of science and contributions of scientists.	Teacher's Guide: 8, 16, 18-19, 54-57, 166-169

(4) S c i e n t i f i c p r o c e s s e s

The student knows how to use a variety of tools and methods to conduct science inquiry.

Knowledge and Skills, Grade 8	Life SCIENCE DAYBOOK
The student is expected to:	Teacher's Guide: 10B, 20B, 24, 25, 40B, 41, 82B, 94B, 94, 95-96, 102-103, 124, 126-127, 129, 144-145, 173, 188B, 188, 190-191, 193, 198B, 220
(A) collect, record, and analyze information using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, hot plates, dissecting equipment, test tubes, safety goggles, spring scales, balances, microscopes, telescopes, thermometers, calculators, field equipment, computers, computer probes, water test kits, and timing devices; and	

Knowledge and Skills, Grade 8	Life SCIENCE DAYBOOK
(B) extrapolate from collected information to make predictions.	Teacher's Guide: 49, 58, 63, 72, 75, 77, 79, 98, 124, 127, 153, 165, 169, 188, 191, 192, 194, 195, 197, 202, 204, 212, 223

(5) Scientific processes

The student knows that relationships exist between science and technology.

Knowledge and Skills, Grade 8	Life SCIENCE DAYBOOK
The student is expected to: (B) design and test a model to solve the problem; and	Teacher's Guide: 146A, 149
(C) evaluate the model and make recommendations for improving the model.	Teacher's Guide: 149

(6) Science concepts

The student knows that interdependence occurs among living systems.

Knowledge and Skills, Grade 8	Life SCIENCE DAYBOOK
The student is expected to: (A) describe interactions among systems in the human organism;	Teacher's Guide: 10-13, 14-17, 18-19, 20-23, 24-27, 28-29, 30-33, 34-37, 38-39, 40-43, 44-47, 48-49, 52-53, 54-57, 58-61, 72-75, 80-81, 102-103, 104-107, 108-109, 110-113, 124-127, 128-131, 132-133, 136-139, 142-145, 146-149, 150-153, 154-155, 156-157, 158-162, 162-165, 198-201, 202-205
(C) describe interactions within ecosystems.	Teacher's Guide: 178-181, 192-194, 196-197, 220

(8) Science concepts

The student knows that matter is composed of atoms.

Knowledge and Skills, Grade 8	Life SCIENCE DAYBOOK
The student is expected to: (A) describe the structure and parts of an atom; and	Teacher's Guide: 10, 40, 42, 218
(B) identify the properties of an atom including mass and electrical charge.	Teacher's Guide: 10, 40, 42, 218

(9) Science concepts

The student knows that substances have chemical and physical properties.

Knowledge and Skills, Grade 8	Life SCIENCE DAYBOOK
The student is expected to: (C) recognize the importance of formulas and equations to express what happens in a chemical reaction.	Teacher's Guide: 29

(11) Science concepts

The student knows that traits of species can change through generations and that the instructions for traits are contained in the genetic material of the organisms.

Knowledge and Skills, Grade 8	Life SCIENCE DAYBOOK
The student is expected to: (A) identify that change in environmental conditions can affect the survival of individuals and of species;	Teacher's Guide: 196-197
(B) distinguish between inherited traits and other characteristics that result from interactions with the environment; and	Teacher's Guide: 58-60, 64-65, 68-71
(C) make predictions about possible outcomes of various genetic combinations of inherited characteristics.	Teacher's Guide: 18-19, 52-53, 64-65, 68, 221

(14) Science concepts

The student knows that natural events and human activities can alter Earth systems.

Knowledge and Skills, Grade 8	Life SCIENCE DAYBOOK
The student is expected to: (B) analyze how natural or human events may have contributed to the extinction of some species; and	Teacher's Guide: 198-201, 220
(C) describe how human activities have modified soil, water, and air quality.	Teacher's Guide: 196-197, 206-207, 212-213

