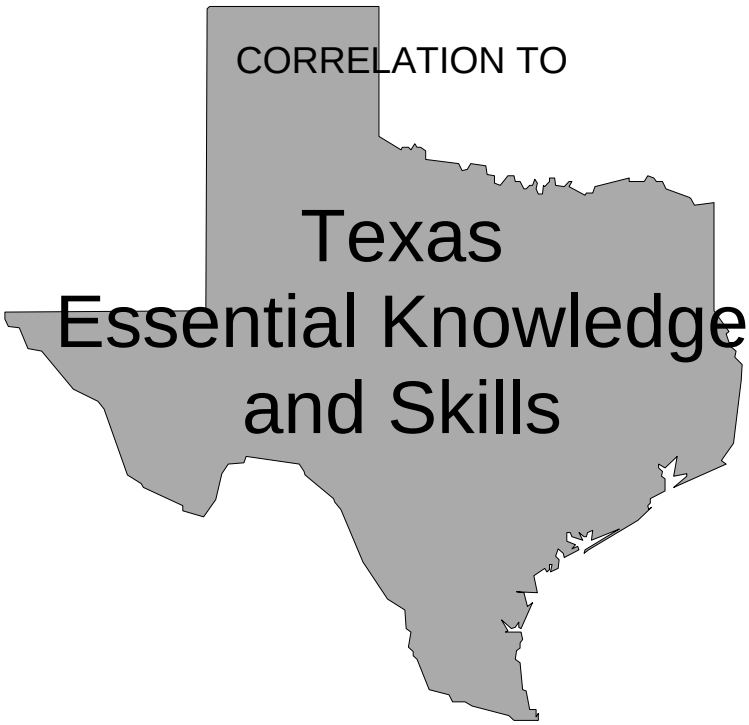
Full Option Science System (FOSS)
Grades K-6

CORRELATION TO



Texas Essential Knowledge and Skills

Delta Education
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Texas Essential Knowledge and Skills For Science

Correlation
To
Full Option Science System

The following is a correlation of the grade K-6 portion of the Texas Essential Knowledge and Skills for Science to Full Option Science System (FOSS)™. This correlation shows representative examples of investigations and activities from the 2002 version of the Elementary FOSS program, which address the TEKS and their elements. A citation does not reflect all of the investigations or activities from FOSS that might address a particular element.

Kindergarten

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(K.1) **Scientific processes.** The student participates in classroom and field investigations following home and school safety procedures. The student is expected to:		
(A) demonstrate safe practices during classroom and field investigations; and	All FOSS modules are designed to include safe practices. Where special caution is needed, safety-warning statements are included as in: Fabric, Activity 1, Part 6 Wood, Activity 2, Part 5	 Page 18 Page 13
(B) learn how to use and conserve resources and materials.	Paper, Activity 2, Part 2 Wood, Activity 1, Part 1	Pages 6-7 Pages 4-5
(K.2) **Scientific processes.** The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to:		
(A) ask questions about organisms, objects, and events;	Trees, Activity 1, Part 1 Fabric, Activity 1, Parts 1-4	Pages 4-7 Pages 4-11
(B) plan and conduct simple descriptive investigations;	Wood, Activity 1, Parts 4-5 Animals Two by Two, Activity 2, Part 1	Pages 10-14 Pages 5-6
(C) gather information using simple equipment and tools to extend the senses;	Fabric, Activity 1, Part 4 Trees, Activity 3, Part 5	Pages 10-11 Pages 9-10
(D) construct reasonable explanations using information; and	Animals Two by Two, Activity 1, Part 2 Wood, Activity 1, Parts 4-5	Pages 9-10 Pages 10-14
(E) communicate findings about simple investigations.	Trees, Activity 3, Part 9 Animals Two by Two, Activity 1, Part 3	Page 14 Pages 11-12
(K.3) **Scientific processes.** The student knows that information and critical thinking are used in making decisions. The student is expected to:		
(A) make decisions using information;	Paper, Activity 1, Part 2 Wood, Activity 1, Parts 4-5	Pages 9-11 Pages 10-14
(B) discuss and justify the merits of decisions; and	Paper, Activity 3, Part 2 Fabric, Activity 2, Part 4	Pages 7-8 Pages 12-13
(C) explain a problem in his/her own words and propose a solution.	Wood, Activity 1, Parts 4-5 Animals Two by Two, Activity 4, Part 4	Pages 10-14 Pages 10-11
(K.4) **Scientific processes.** The student uses age-appropriate tools and models to verify that organisms and objects and parts of organisms and objects can be observed, described, and measured. The student is expected to:		
(A) identify and use senses as tools of observation; and	Fabric, Activity 1, Part 1 Trees, Activity 1, Part 1	Pages 4-5 Pages 4-7
(B) make observations using tools including hand lenses, balances, cups, bowls, and computers.	Fabric, Activity 1, Part 4 Trees, Activity 3, Part 5	Pages 10-11 Pages 9-10

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
K.5) **Science concepts.** The student knows that organisms, objects, and events have properties and patterns. The student is expected to:		
(A) describe properties of objects and characteristics of organisms;	Paper, Activity 1, Part 1 Animals Two by Two, Activity 4, Parts 1-2	Pages 4-6 Pages 4-7
(B) observe and identify patterns including seasons, growth, and day and night and predict what happens next; and	Trees, Activity 3, Parts 1-9 Animals Two by Two, Activity 5, Parts 1-3	Pages 4-14 Pages 6-13
(C) recognize and copy patterns seen in charts and graphs.	Fabric, Activity 2, Part 4 Wood, Activity 1, Part 5	Pages12-13 Pages 12-14
(K.6) **Science concepts.** The student knows that systems have parts and are composed of organisms and objects. The student is expected to:		
(A) sort organisms and objects into groups according to their parts and describe how the groups are formed;	Animals Two by Two, Activity 1, Part 4 Trees, Activity 2, Parts 1-3 Fabric, Activity 1, Parts 1-2	Pages 13-14 Pages 4-9 Pages 4-7
(B) record observations about parts of plants including leaves, roots, stems, and flowers;	Trees, Activity 1, Part 1 Trees, Activity 3, Parts 1-9	Pages 4-7 Pages 4-14
(C) record observations about parts of animals including wings, feet, heads, and tails;	Animals Two by Two, Activity 5, Parts 1-4 Animals Two by Two, Activity 1, Parts 1-4	Pages 6-15 Pages 6-14
(D) identify parts that, when separated from the whole, may result in the part or the whole not working, such as cars without wheels and plants without roots; and	Fabric, Activity 1, Part 4 Trees, Activity 1, Part 1	Pages 10-14 Pages 4-7
(E) manipulate parts of objects such as toys, vehicles, or construction sets that, when put together, can do things they cannot do by themselves.	Paper, Activity 3, Part 1 Wood, Activity 2, Parts 3-4	Pages 4-5 Pages 8-11
(K.7) **Science concepts.** The student knows that many types of change occur. The student is expected to:		
(A) observe, describe, and record changes in size, mass, color, position, quantity, time, temperature, sound, and movement;	Trees, Activity 3, Parts 1-9 Animals Two by Two, Activity 2, Part 2 Animals Two by Two, Activity 5, Parts 1-4	Pages 4-14 Pages 7-8 Pages 6-15
(B) identify that heat causes change, such as ice melting or the Sun warming the air and compare objects according to temperature;	Animals Two by Two, Activity 5, Part 1	Pages 6-8
(C) observe and record weather changes from day to day and over seasons; and	Trees, Activity 3, Parts 1-9 Air and Weather, Investigation 2, Parts 1-4* Air and Weather, Investigation 4, Parts 1-2*	Pages 4-14 Pages 8-27 Pages 8-18
(D) observe and record stages in the life cycle of organisms in their natural environment.	Trees, Activity 3, Parts 1-9 Animals Two by Two, Activity 5, Parts 1-4	Pages 4-14 Pages 6-15

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(K.8) **Science concepts.** The student knows the difference between living organisms and nonliving objects. The student is expected to:		
(A) identify a particular organism or object as living or nonliving; and	Trees, Activity 1, Part 2 Animals Two by Two, Activity 5, Part 1	Pages 8-10 Pages 6-8
(B) group organisms and objects as living or nonliving.		

* This module was developed for use in either grade one or two.

(K.9) **Science concepts.** The student knows that living organisms have basic needs. The student is expected to:		
(A) identify basic needs of living organisms;	Animals Two by Two, Activity 4, Part 4 Trees, Activity 1, Part 2	Pages 10-11 Pages 8-10
(B) give examples of how living organisms depend on each other; and	Trees, Activity 1, Part 1 Trees, Activity 3, Parts 1-2 Animals Two by Two, Activity 4, Part 4	Pages 4-7 Pages 4-5 Pages 10-11
(C) identify ways that the Earth can provide resources for life.	Trees, Activity 1, Part 1 Trees, Activity 1, Part 2	Pages 4-7 Pages 8-10
(K.10) **Science concepts.** The student knows that the natural world includes rocks, soil, and water. The student is expected to:		
(A) observe and describe properties of rocks, soil, and water; and	Pebbles, Sand, and Silt, Investigation 1, Parts 1-5*	Pages 8-29
(B) give examples of ways that rocks, soil, and water are useful.	Pebbles, Sand, and Silt, Investigation 3, Parts 1-5*	Pages 8-29

* This module was developed for use in either grade one or two.

Grade One

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(1.1) **Scientific processes.** The student conducts classroom and field investigations following home and school safety procedures. The student is expected to:		
(A) demonstrate safe practices during classroom and field investigations; and	All FOSS modules are designed to include safe practices. Where special caution is needed, safety-warning statements are included as in: New Plants, Investigation 1, Part 2 Air and Weather, Overview	 Page 17 Page 17
(B) learn how to use and conserve resources and materials.	New Plants, Investigation 1, Part 3 Pebbles, Sand, And Silt, Investigation 4, Interdisciplinary Extensions	Page 29 Page 27
(1.2) **Scientific processes.** The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to:		
(A) ask questions about organisms, objects, and events;	New Plants, Investigation 2, Part 2 Pebbles, Sand and Silt, Investigation 1, Part 1 Solids and Liquids, Investigation 4, Part 1	Page 18 Page 12 Pages 10-16
(B) plan and conduct simple descriptive investigations;	Solids and Liquids, Investigation 3, Part 1 Pebbles, Sand and Silt, Investigation 1, Part 2 FOSS Science Stories, Pebbles, Sand, and Silt	Pages 11-13 Pages 13-17 Pages 22-23
(C) gather information using simple equipment and tools to extend the senses;	Pebbles, Sand and Silt, Investigation 1, Part 1 New Plants, Investigation 2, Parts 1-2	Pages 8-12 Pages 8-19
(1.3) **Scientific processes.** The student knows that information and critical thinking are used in making decisions. The student is expected to:		
(A) make decisions using information;	Solids and Liquids, Investigation 1, Part 3 Pebbles, Sand and Silt, Investigation 1, Parts 3-4	Pages 21-24 Pages 18-25
(B) discuss and justify the merits of decisions; and	Solids and Liquids, Investigation 1, Part 3 Pebbles, Sand and Silt, Investigation 1, Part 3-4	Pages 21-24 Pages 18-25

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(C) explain a problem in his/her own words and identify a task and solution related to the problem.	Solids and Liquids, Investigation 1, Part 3 New Plants, Investigation 4, Part 2	Pages 21-24 Pages 13-19
(1.4) **Scientific processes.** The student uses age-appropriate tools and models to verify that organisms and objects and parts of organisms and objects can be observed, described, and measured. The student is expected to:		
(A) collect information using tools including hand lenses, clocks, computers, thermometers, and balances;	Pebbles, Sand and Silt, Investigation 1, Part 1 Solids and Liquids, Investigation 4, Interdisciplinary Extensions FOSS Website Solids and Liquids, Investigation 3, Interdisciplinary Extensions Air and Weather, Investigation 2, Part 2	Pages 8-12 Page 28 Page 30 Pages 19-22
(B) record and compare collected information; and	Pebbles, Sand and Silt, Investigation 4, Part 3 New Plants, Investigation 1, Part 2	Pages 19-25 Pages 20-28
(C) measure organisms and objects and parts of organisms and objects, using non-standard units such as paper clips, hands, and pencils.	New Plants, Investigation 1, Part 2 Solids and Liquids, Investigation 3, Part 1	Pages 13-22 Pages 8-13
(1.5) **Science concepts.** The student knows that organisms, objects, and events have properties and patterns. The student is expected to:		
(A) sort objects and events based on properties and patterns; and	Pebbles, Sand and Silt, Investigation 1, Part 3 Solids and Liquids, Investigation 3, Part 2	Pages 18-21 Pages 14-18
(B) identify, predict, and create patterns including those seen in charts, graphs, and numbers.	New Plants, Investigation 2, Part 3 Solids and Liquids, Investigation 4, Part 1 Pebbles, Sand and Silt, Investigation 1, Part 4	Pages 20-28 Pages 7-16 Pages 22-25
(1.6) **Science concepts.** The student knows that systems have parts and are composed of organisms and objects. The student is expected to:		
(A) sort organisms and objects according to their parts and characteristics;	New Plants, Investigation 2, Part 2 Pebbles, Sand and Silt, Investigation 1, Part 4	Pages 15-19 Pages 22-25

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(B) observe and describe the parts of plants and animals;	New Plants, Investigation 1, Part 3 Insects, Investigation 1, Part 2 FOSS Science Stories, New Plants FOSS Science Stories, Insects	Pages 23-30 Pages 16-21 Pages 3-7, 8-11 Pages 12-15, 22-23
(C) manipulate objects such as toys, vehicles, or construction sets so that the parts are separated from the whole which may result in the part or the whole not working; and	Solids and Liquids, Investigation 1, Part 3 Pebbles, Sand, and Silt, Investigation 3, Parts 1-5	Pages 21-24 Pages 8-29
(D) identify parts that, when put together, can do things they cannot do by themselves, such as a working camera with film, a car moving with a motor, and an airplane flying with fuel.	Solids and Liquids, Investigation 1, Part 3 FOSS Science Stories, Pebbles, Sand, and Silt	Pages 21-24 Pages 14-17
(1.7) **Science concepts.** The student knows that many types of change occur. The student is expected to:		
(A) observe, measure, and record changes in size, mass, color, position, quantity, sound, and movement;	New Plants, Investigation 2, Part 3 Solids and Liquids, Investigation 4, Part 1	Pages 23-30 Pages 7-16
(B) identify and test ways that heat may cause change such as when ice melts;	Solids and Liquids, Investigation 4, Interdisciplinary Extensions FOSS Science Stories, Solids and Liquids	Page 29 Pages 14-17
(C) observe and record changes in weather from day to day and over seasons; and	Air and Weather, Investigation 2, Parts 1-4 Air and Weather, Investigation 4, Parts 1-2 FOSS Science Stories, Air and Weather	Pages 13-27 Pages 8-18 Pages 7-23
(D) observe and record changes in the life cycle of organisms.	New Plants, Investigation 1, Parts 1 –3	Pages 8-30
(1.8) **Science concepts.** The student distinguishes between living organisms and nonliving objects. The student is expected to:		
(A) group living organisms and nonliving objects; and	New Plants, Investigation 1, Part 1 Solids & Liquids, Investigation 1,Part 2 FOSS Science Stories, New Plants	Pages 8-12 Pages 17-20 Pages 18-23
(B) compare living organisms and nonliving objects.	New Plants, Investigation 1, Part 1	Pages 8-12
(1.9) **Science concepts.** The student knows that living organisms have basic needs. The student is expected to:		

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(A) identify characteristics of living organisms that allow their basic needs to be met; and	New Plants, Investigation 1, Part 3 FOSS Science Stories, New Plants	Pages 23-30 Pages 3-7, 8-11, 18-23
(B) compare and give examples of the ways living organisms depend on each other for their basic needs.	New Plants, Investigation 1, Part 3 FOSS Science Stories, New Plants	Pages 23-30 Pages 8-11
(1.10) **Science concepts.** The student knows that the natural world includes rocks, soil, and water. The student is expected to:		
(A) identify and describe a variety of natural sources of water including streams, lakes, and oceans;	Air and Weather, Investigation 2, Part 4	Pages 24-27
(B) observe and describe differences in rocks and soil samples; and	Pebbles, Sand and Silt, Investigation 1, Part 1 – 4 Pebbles, Sand & Silt, Investigation 4, Parts 1 – 3 FOSS Science Stories, Pebbles, Sand, and Silt	Pages 8-25 Pages 8-25 Pages 3-7, 8-11
(C) identify how rocks, soil, and water are used and how they can be recycled.	Pebbles, Sand and Silt, Investigation 3, Parts 1 – 5 Pebbles, Sand & Silt, Investigation 4, Part 3 FOSS Science Stories, Pebbles, Sand, and Silt	Pages 8-29 Pages 19-25 Pages 14-17, 18-21

Grade Two

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(2.1) **Scientific processes.** The student conducts classroom and field investigations following home and school safety procedures. The student is expected to:		
(A) demonstrate safe practices during classroom and field investigations; and	All FOSS modules are designed to include safe practices. Where special caution is needed, safety-warning statements are included as in: Air and Weather, Investigation 1, Part 4 Balance and Motion, Overview	 Page 24 Page 17
(B) learn how to use and conserve resources and materials.	Insects, Investigation 4, Part 5	Page 29
(2.2) **Scientific processes.** The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to:		
(A) ask questions about organisms, objects, and events;	Insects, Investigation 1, Part 2 Balance and Motion, Investigation 1, Part 1 Air and Weather, Investigation 1, Part 1	Pages 16-21 Pages 8-13 Pages 8-12
(B) plan and conduct simple descriptive investigations;	Balance and Motion, Investigation 1, Part 2 Air and Weather, Investigation 1, Part 1	Pages 14-18 Pages 8-12
(C) compare results of investigations with what students and scientists know about the world;	Air and Weather, Investigation 1, Part 4 Insects, Investigation 1, Part 2 FOSS Science Stories, Insects	Pages 21-26 Pages 16-21 Pages 16-21
(D) gather information using simple equipment and tools to extend the senses;	Air and Weather, Investigation 2, Parts 2-4 Insects, Investigation 1, Part 2	Pages 14-27 Pages 16-21
(E) construct reasonable explanations and draw conclusions using information and prior knowledge; and	Balance and Motion, Investigation 1, Part 3 Air and Weather, Investigation 1, Parts 4-5	Pages 19-23 Pages 21-33
(F) communicate explanations about investigations.	Insects, Investigation 1, Part 3 Balance and Motion, Investigation 1, Part 2	Pages 22-25 Pages 14-18
(2.3) **Scientific processes.** The student knows that information and critical thinking are used in making decisions. The student is expected to:		
(A) make decisions using information;	Balance and Motion, Investigation 3, Part 3 Air and Weather, Investigation 1, Part 2	Pages 19-25 Pages 13-16

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(B) discuss and justify the merits of decisions; and	Air and Weather, Investigation 1, Part 4 Insects, Investigation 1, Part 1	Pages 21-26 Pages 8-15
(C) explain a problem in his/her own words and identify a task and solution related to the problem.	Insects, Investigation 1, Part 1 Balance and Motion, Investigation 3, Part 2	Pages 8-15 Pages 13-18
(2.4) **Scientific processes.** The student uses age-appropriate tools and models to verify that organisms and objects and parts of organisms and objects can be observed, described, and measured. The student is expected to:		
(A) collect information using tools including hand lenses, clocks, computers, thermometers, and balances;	Insects, Investigation 4, Part 1 Air and Weather, Investigation 2, Part 2 FOSS Website Solids and Liquids, Investigation 4, Interdisciplinary Extensions Balance & Motion, Investigation 1, Parts 1-4	Pages 10-13 Pages 14-19 Page 28 Pages 8-28
(B) measure and compare organisms and objects and parts of organisms and objects, using standard and non-standard units.	Balance and Motion, Investigation 3, Math Extensions Insects, Investigation 1, Interdisciplinary Extensions	Page 27 Pages 26-28
(B) identify, predict, and create patterns including those seen in charts, graphs, and numbers.	Air and Weather, Investigation 4, Part 1 Insects, Investigation 1, Math Extension	Pages 8-11 Page 26
(2.6) **Science concepts.** The student knows that systems have parts and are composed of organisms and objects. The student is expected to:		
(A) manipulate, predict, and identify parts that, when separated from the whole, may result in the part or the whole not working, such as flashlights without batteries and plants without leaves;	Balance and Motion, Investigation 1, Part 4 Air and Weather, Investigation 1, Part 6	Pages 24-28 Pages 34-38
(B) manipulate, predict, and identify parts that, when put together, can do things they cannot do by themselves, such as a guitar and guitar strings;	Balance and Motion, Investigation 2, Part 1 Air and Weather, Investigation 1, Part 3	Pages 8-13 Pages 17-20
(C) observe and record the functions of plant parts; and	New Plants, Investigation 1, Part 3 FOSS Science Stories, New Plants	Pages 23-30 Pages 3-7, 8-11
(D) observe and record the functions of animal parts.	Insects, Investigation 1, Part 2 FOSS Science Stories, Insects	Pages 16-21 Pages 12-15, 22-23
(2.7) **Science concepts.** The student knows that many types of change occur. The student is expected to:		

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(A) observe, measure, record, analyze, predict, and illustrate changes in size, mass, temperature, color, position, quantity, sound, and movement;	Balance and Motion, Investigation 3, Part 1 Air and Weather, Investigation 2, Parts 1 – 4 Insects, Investigation 4, Parts 1-8	Pages 6-12 Pages 13-27 Pages 10-31
(B) identify, predict, and test uses of heat to cause change such as melting and evaporation;	Air and Weather, Investigation 2, Part 4 Air and Weather, Investigation 2, Interdisciplinary Extensions Solids and Liquids, Investigation 4, Interdisciplinary Extensions	Page 27 Page 32 Page 29
(C) demonstrate a change in the motion of an object by giving the object a push or a pull; and	Balance and Motion, Investigation 3, Part 1 FOSS Science Stories, Balance and Motion	Pages 6-12 Pages 10-13
(D) observe, measure, and record changes in weather, the night sky, and seasons.	Air and Weather, Investigation 2, Parts 1 – 4 Air and Weather, Investigation 4, Parts 1-3 FOSS Science Stories, Air and Weather	Pages 13-27 Pages 8-24 Pages 7-13, 14-17, 18-23
(2.8) **Science concepts.** The student distinguishes between living organisms and nonliving objects. The student is expected to:		
(A) identify characteristics of living organisms; and	Insects, Investigation 1, Parts 1-3 FOSS Science Stories, Insects New Plants, Investigation 1, Part 1	Pages 8-25 Pages12-15 Pages 8-12
(B) identify characteristics of nonliving objects.	Air and Weather, Investigation 1, Parts 1-6 Balance & Motion, Investigation 1, Parts 1-4 Solids & Liquids, Investigation 1, Part 2	Pages 8-38 Pages 8-28 Pages 17-20
(2.9) **Science concepts.** The student knows that living organisms have basic needs. The student is expected to:		
(A) identify the external characteristics of different kinds of plants and animals that allow their needs to be met; and	Insects, Investigation 3, Part 3 New Plants, Investigation 1, Part 3 FOSS Science Stories, Insects	Pages 21-26 Pages 23-30 Pages 8-11, 22-23
(B) compare and give examples of the ways living organisms depend on each other and on their environments.	Insects, Investigation 4, Part 3 FOSS Science Stories, Insects	Pages 19-22 Pages 3-7, 16-21
(2.10) **Science concepts.** The student knows that the natural world includes rocks, soil, water, and gases of the atmosphere. The student is expected to:		

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	***FOSS INVESTIGATION/ ACTIVITY***	***PAGE NUMBER (S)***
(A) describe and illustrate the water cycle; and	Air and Weather, Investigation 2, Part 4 FOSS Science Stories, Air and Weather	Page 27 Pages 7-13
(B) identify uses of natural resources.	Air and Weather, Investigation 2, Part 4 FOSS Science Stories, Air and Weather Pebbles, Sand, and Silt, Investigation 3, Parts 1-5	Page 27 Pages 1-6 Pages 8-29

Grade Three

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(3.1) **Scientific processes.** The student conducts field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to:		
(A) demonstrate safe practices during field and laboratory investigations; and	All FOSS modules are designed to include safe practices. Where special caution is needed, safety-warning statements are included as in: Physics of Sound, FOSS Overview Water Investigation 2, Part 1 Magnetism and Electricity, Investigation 1, Part 1	 Page 17 Page 9 Page 14
(B) make wise choices in the use and conservation of resources and the disposal or recycling of materials.	FOSS Science Stories, Water FOSS Science Stories, Water Water, Investigation 3, Interdisciplinary Extensions Water, Investigation 4, Math Extensions FOSS Science Stories, Measurement Measurement, Investigation 3, Part 1	Pages 17-21 Pages 24-26 Page 27 Pages 30-31 Pages16-17 Page 12
(3.2) **Scientific processes.** The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:		
(A) plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology;	Water, Investigation 4, Part 4 Measurement, Investigation 2, Part 3	Pages 24-28 Pages 20-21
(B) collect information by observing and measuring;	Water, Investigation 4, Part 3 Water, Investigation 3, Part 2 Water, Investigation 3, Part 3	Pages 19-23 Pages 12-16 Pages 17-20
(C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence;	Water, Investigation 3, Part 2 Water, Investigation 3, Part 3	Pages 14-16 Pages 17-20
(D) communicate valid conclusions; and	Measurement, Investigation 2, Part 3 Water, Investigation 3, Part 2 Water, Investigation 4, Part 4 Water, Investigation 2, Part 2	Pages 20-21 Page 16 Pages 24-28 Pages 14-18

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(E) construct simple graphs, tables, maps, and charts to organize, examine and evaluate information.	Structures of Life, Investigation 2, Math Extension Structures of Life, Investigation 3, Math Extension Structures of Life, Investigation 3, Part 4 Structures of Life, Investigation 3, Part 4 Water, Investigation 3, Part 2 Water, Investigation 4, Part 3 Water, Investigation 4, Math Extension Measurement, Investigation 4, Part 2	Page 23/Student Sheet #25 Page 31/Student Sheet #26 Pages 27-29 Pages 27-29 Pages 13 & 15 Pages 22 Pages 30-31 Pages 16-17
(3.3) **Scientific processes.** The student knows that information, critical thinking, and scientific problem solving are used in making decisions. 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;	Magnetism and Electricity, Investigations 3, Part 3 Magnetism and Electricity, Investigation 4, Part 2 Magnetism and Electricity, Science Stories Section	Pages 24-26 Pages 16-17/ Student Sheet #19 Page 11
(B) draw inferences based on information related to promotional materials for products and services;	FOSS Science Story, Measurement Measurement, Investigation 3, Part 2	Pages 18-20 Pages 16-17/Student Sheet #11
(C) represent the natural world using models and identify their limitations;	Earth Materials, Investigation 1, Part 1 Magnetism and Electricity, Science Stories Section Human Body, Investigation 1 Art Extension	Pages 11-15 Pages 4-5 Page 28
(D) evaluate the impact of research on scientific thought, society, and the environment; and	FOSS Science Stories, Magnetism and Electricity FOSS Science Stories, Magnetism and Electricity FOSS Science Stories, Water FOSS Science Stories, Ideas and Inventions FOSS Science Stories, Folio Ideas & Inventions	Page 25 Pages 12-15 Pages 24-26 Pages 17-22 Pages 12-17
(E) connect Grade 3 science concepts with the history of science and contributions of scientists.	FOSS Science Stories, Magnetism & Electricity FOSS Science Stories, Water FOSS Science Stories, Measurement FOSS Science Stories, Measurement FOSS Science Stories, Structures of Life	Pages 8-23 Pages 24-26 Pages 21 Pages 11-13 Pages 6-9

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(3.4) **Scientific processes.** The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:		
(A) collect and analyze information using tools including calculators, microscopes, cameras, safety goggles, sound recorders, clocks, computers, thermometers, hand lenses, meter sticks, rulers, balances, magnets, and compasses; and	FOSS Website Measurement, Investigation 3, Math Extensions Measurement, Investigation 4, Part 3 Structures of Life Investigation 1, Part 1 Ideas & Inventions, Investigation 4, Science Extensions Physics of Sound, Investigation 4, Part 2 Earth Materials, Investigation 1, Part 2 Measurement, Investigation 4, Part 3 Measurement, Investigation 4, Part 1 Measurement, Investigation 4, Part 1 & Part 2 Magnetism and Electricity, Investigation 1, Part 1 & Part 2 Earth Materials, Investigation 1, Part 1 Magnetism and Electricity, Investigation 1, Part 4	Top of the FOSSWEB Student Home Page Pages 22-23 Pages 20-21 Page 32 Page 27 Pages 19-20 Page 19 Page 20 Page 9 Pages 11-17 Pages 11-15; 20-22 Pages 12 Pages 32-34
(B) demonstrate that repeated investigations may increase the reliability of results.	Human Body, Investigation 1, Part 1 Human Body, Investigation 4, Part 3 Water, Investigation 1, Part 2	Pages 11-14 Pages 22 & 23 Page 16
(3.5) **Science concepts.** The student knows that systems exist in the world. The student is expected to:		
(A) observe and identify simple systems such as a sprouted seed and a wooden toy car; and	Magnetism and Electricity, Investigation 2, Part 1-3 Water, Investigation 4, Part 2 Water, Science Stories Section Human Body, Investigation 1, Part 1 Structures of Life, Investigation 1, Part 2	Page 10-24 Pages 15-18 Page 19 Page 11-14 Pages 22-27
(B) observe a simple system and describe the role of various parts such as a yo-yo and string.	Magnetism and Electricity, Investigation 2, Part 2 Water, Investigation 4, Part 2 Measurement, Investigation 2, Part 1	Page 15-19 Pages 15-18 Pages 10-13

(3.6) **Science concepts.** The student knows that forces cause change. The student is expected to:		
(A) measure and record changes in the position and direction of the motion of an object to which a force such as a push or pull has been applied; and	Water, Investigation 1, Part 3 Water, Investigation 4, Part 2 Magnetism and Electricity, Investigation 1, Part 3	Pages 21-23 Pages 16-18 Pages 25-29
(B) identify that the surface of the Earth can be changed by forces such as earthquakes and glaciers.	FOSS Science Stories, Earth Materials FOSS Science Stories, Water Water, Science Stories	Pages 1-4 Pages 22 -23 Pages 9
(3.7) **Science concepts.** The student knows that matter has physical properties. The student is expected to:		
(A) gather information including temperature, magnetism, hardness, and mass using appropriate tools to identify physical properties of matter; and	Measurement, Investigation 4, Parts 1-2 Water, Investigation 2, Part 1 Water, Investigation 2, Part 3 Magnetism and Electricity, Investigation 1, Part 1 Measurement, Investigation 2, Parts 1-3 Earth Materials, Investigation 2, Part 5	Pages 11-17 Pages 11-13 Pages 21-24 Pages 11-15 Pages 10-21 Pages 16-20
(B) identify matter as liquids, solids, and gases.	Water, Investigation 1, Part 1 Water, Investigation 3, Part 1 Water, Investigation 2, Part 3 FOSS Science Stories, Water	Pages 11-13 Pages 10-11 Pages 21-23 Pages 12-16
(3.8) **Science concepts.** The student knows that living organisms need food, water, light, air, a way to dispose of waste, and an environment in which to live. The student is expected to:		
(A) observe and describe the habitats of organisms within an ecosystem;	Structures of Life, Investigation 3, Part 2 Structures of Life, Investigation 4, Part 1	Pages 18-20 Pages 10-13
(B) observe and identify organisms with similar needs that compete with one another for resources such as oxygen, water, food, or space;	Structures of Life, Science Stories Section Structures of Life, Investigation 3, Science Extensions Structures of Life, Investigation 4, Part 4/Student Sheet #21	Pages 14-17 Page 32 Pages 28-29

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(C) describe environmental changes in which some organisms would thrive, become ill, or perish; and	Structures of Life, Investigation 3, Part 2 FOSS Science Stories, Structures of Life Structures of Life, Science Stories Section FOSS Science Stories, Water FOSS Science Stories, Water	Pages 18-19 Pages 22-23 Page 17 Pages 22-23 Pages 24-26
(D) describe how living organisms modify their physical environment to meet their needs such as beavers building a dam or humans building a home.	FOSS Science Stories, Water FOSS Science Stories, Structures of Life FOSS Science Stories, Structures of Life	Pages 27-29 Pages 10-16 Page 9
(3.9) **Science concepts.** The student knows that species have different adaptations that help them survive and reproduce in their environment. The student is expected to:		
(A) observe and identify characteristics among species that allow each to survive and reproduce; and	Structures of Life, Investigation 1, Part 2 Structures of Life, Investigation 2, Parts 1-3 Structures of Life, Investigation, Part 1 Structures of Life, Investigation 4, Part 1 FOSS Science Stories, Structures of Life	Pages 18-27 Pages 8-22 Pages 8-15 Pages 8-13 Pages 1-3
(B) analyze how adaptive characteristics help individuals within a species to survive and reproduce.	Structures of Life, Investigation 4, Part 1 Structures of Life, Investigation 4, Part 1	Pages 4-5; Pages 8-13
(3.10) **Science concepts.** The student knows that many likenesses between offspring and parents are inherited from the parents. The student is expected to:		
(A) identify some inherited traits of plants; and	Structures of Life, Investigation 2, Part 1 FOSS Science Stories, Structures of Life FOSS Website	Pages 11-12 Pages 6-9 Structure of Life Website
(B) identify some inherited traits of animals.	Structures of Life, Investigation 4, Part 1	Pages 8-13
(3.11) **Science concepts.** The student knows that the natural world includes earth materials and objects in the sky. The student is expected to:		
(A) identify and describe the importance of earth materials including rocks, soil, water, and gases of the atmosphere in the local area and classify them as renewable, nonrenewable, or inexhaustible resources;	Earth Materials, Investigation 4, Part 2/Student Sheet #19 FOSS Website	Pages 14-18 Water, Resources Game

	FOSS Science Stories, Water Water, Investigation 4, Part 1	Pages 17-21 Pages 8-13
(B) identify and record properties of soils such as color and texture, capacity to retain water, and ability to support the growth of plants;	Water, Investigation 4, Part 1 Water, Investigation 4, Part 4/Student Sheet #19	Pages 8-13 Pages 24-28
(C) identify the planets in our solar system and their position in relation to the Sun; and	FOSS Website FOSS Science Stories, Models and Designs*	Models and Designs Website Pages 5-10
(D) describe the characteristics of the Sun.	FOSS Website FOSS Science Stories, Solar Energy*	Solar Energy Website Pages 1-7

*This module was developed for use in grade five or grade six.

Grade Four

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(4.1) **Scientific processes.** The student conducts field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to:		
(A) demonstrate safe practices during field and laboratory investigations; and	All FOSS modules are designed to include safe practices. Where special caution is needed, safety-warning statements are included as in: Ideas and Inventions, FOSS Overview Human Body, Investigation 1, Part 1 Magnetism & Electricity Investigation 2, Part 1	 Page 17 Page 11 Page 9
(B) make wise choices in the use and conservation of resources and the disposal or recycling of materials.	Ideas and Inventions, Investigation 3, Part 1 FOSS Science Stories, Water FOSS Science Stories, Water	Page 12 Pages 18-21 Pages 24-26
(4.2) **Scientific processes.** The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:		
(A) plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology;	Ideas and Inventions, Investigation 4, Part 2 Structures of Life, Investigation 3, Part 4	Pages 14-18 Pages 27-30
(B) collect information by observing and measuring;	Ideas and Inventions, Investigation 2, Part 1 Earth Materials, Investigation 1, Part 1 Water, Investigation 4, Part 3 Water, Investigation 3, Part 2	Pages 11-15 Pages 11-13 Pages 19-23 Pages 13-16
(C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence;	Magnetism and Electricity, Investigation 1, Part 4 Human Body, Investigation 4, Part 1 Human Body, Investigation 4, Part 2	Pages 30-34 Pages 8-16 Pages 17-19
(D) communicate valid conclusions; and	Magnetism and Electricity Investigation 1, Part 4 Water, Investigation 3, Part 2 Human Body, Investigation 3, Part 1	Page 34 Pages 12-17 Pages 8-14

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(E) construct simple graphs, tables, maps, and charts to organize, examine and evaluate information.	Ideas & Inventions, Investigation 2, Part 1 Human Body Investigation 4, Part 2/Student Sheet #19 Magnetism & Electricity, Investigation 2, Part 2/Student Sheet #8 & #9 Magnetism and Electricity, Investigation 1, Part 3 Magnetism and Electricity, Investigation 1, Part 3 Magnetism and Electricity, Investigation 1, Science Extension Structures of Life, Investigation 3, Part 4	Pages 11-15 Page 19 Pages 17-18 Page 27 Page 28 Page 36 Pages 27-29
(4.3) **Scientific processes.** The student uses critical thinking and scientific problem solving to make informed decisions. 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;	Magnetism and Electricity, Science Stories Section Magnetism and Electricity, Investigation 3, Part 3 Physics of Sound, Investigation 1, Part 2 Student Sheet #3	Pages 10-11 Pages 24-26 Page 20
(B) draw inferences based on information related to promotional materials for products and services;	FOSS Science Story, Measurement Measurement, Investigation 3, Part 2	Pages 18-20 Pages 16-17/Student Sheet #11
(C) represent the natural world using models and identify their limitations;	Earth Materials, Investigation 1, Part 1 Magnetism and Electricity, Investigation 3, Part 3 Human Body, Investigation 3, Parts 1-3	Pages 11-15 Pages 22-26 Pages 8-21
(D) evaluate the impact of research on scientific thought, society, and the environment; and	FOSS Science Stories, Magnetism and Electricity FOSS Science Stories, Magnetism and Electricity FOSS Science Stories, Water FOSS Science Stories, Ideas and Inventions and	Page 25 Pages 12-15 Pages 24-26 Pages 1-3, 9, 11-14, 18, 21
(E) connect Grade 4 science concepts with the history of science and contributions of scientists.	Earth Materials, Investigation 2, Part 1 FOSS Science Stories, Magnetism and Electricity FOSS Science Stories Water FOSS Science Stories Ideas and Inventions,	Page 25 Pages 12-15 Pages 24-26 Pages 9-10

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(4.4) **Scientific processes.** The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:		
(A) collect and analyze information using tools including calculators, safety goggles, microscopes, cameras, sound recorders, computers, hand lenses, rulers, thermometers, meter sticks, timing devices, balances, and compasses; and	FOSS Website Measurement, Investigation 4, Part 3 Structures of Life, Investigation 1, Part 1 Ideas and Inventions, Investigation 3, Science Extensions Measurement, Investigation 4, Part 3 Measurement, Investigation 4, Part 1 Physics of Sound, Investigation 4, Part 2 Magnetism and Electricity, Investigation 1, Part 4 FOSS Website Measurement, Investigation 4, Part 1 & Part 2 Magnetism and Electricity, Investigation 1, Part 1 & Part 2 Earth Materials, Investigation 1, Part 1	Top of the FOSSWEB Student Home page Page 20-21 Page 32 Page 24 Page 20 Page 9 Pages 19-20 Page 32-34 Pages 11-17 Pages 11-15 Page 12
(B) demonstrate that repeated investigations may increase the reliability of results.	Human Body, Investigation 1, Part 1 Human Body, Investigation 4, Part 3	Pages 11-14 Pages 22-23
(4.5) **Science concepts.** The student knows that complex systems may not work if some parts are removed. The student is expected to:		
(A) identify and describe the roles of some organisms in living systems such as plants in a schoolyard, and parts in nonliving systems such as a light bulb in a circuit; and	Magnetism and Electricity, Investigation 2, Parts 1-3 Water, Investigation 4, Part 2 Human Body, Investigation 1, Part 1	Pages 8-25 Pages 15-18 Pages 11-14
(B) predict and draw conclusions about what happens when part of a system is removed.	Magnetism and Electricity, Investigation 1, Part 3 Magnetism and Electricity, Investigation 2, Part 3	Pages 25-29 Pages 20-25
(4.6) **Science concepts.** The student knows that change can create recognizable patterns. The student is expected to:		

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(A) identify patterns of change such as in weather, metamorphosis, and objects in the sky;	Structures of Life, Investigation 2, Part 3 FOSS Science Stories, Structures of Life FOSS Science Stories, Earth Materials	Pages 20-22 Pages 20-21 Pages 1-4
(B) illustrate that certain characteristics of an object can remain constant even when the object is rotated like a spinning top, translated like a skater moving in a straight line, or reflected on a smooth surface; and	Ideas and Inventions, Investigation 4, Part 2 Ideas and Inventions, Investigation 4/Teacher Background	Pages 16-17 Pages 4-5
(C) use reflections to verify that a natural object has symmetry.	Ideas and Inventions, Investigation 4, Part 1 Ideas and Inventions, Investigation 4, Science Extension	Pages 8-13 Page 27
(4.7) **Science concepts.** The student knows that matter has physical properties. The student is expected to:		
(A) observe and record changes in the states of matter caused by the addition or reduction of heat; and	Measurement, Investigation 4, Part 2 Water, Investigation 2, Part 3 Water, Investigation 3, Parts 1-4	Pages 16-17 Pages 21-24 Pages 10-26
(B) conduct tests, compare data, and draw conclusions about physical properties of matter including states of matter, conduction, density, and buoyancy.	Water, Investigation 1, Parts 1-3 Water, Investigation 2, Parts 1-3 Magnetism and Electricity, Investigation 2, Part 3	Pages 8-23 Pages 8-24 Pages 20-25
(4.8) **Science concepts.** The student knows that adaptations may increase the survival of members of a species. The student is expected to:		
(A) identify characteristics that allow members within a species to survive and reproduce;	FOSS Science Stories, Structures of Life FOSS Science Stories, Structures of Life FOSS Science Stories, Structures of Life	 Pages 1-3 Pages 17-19 Pages 22-25
(B) compare adaptive characteristics of various species; and	FOSS Science Stories, Structures of Life FOSS Science Stories, Structures of Life FOSS Science Stories, Structures of Life FOSS Science Stories Folio, Structures of Life	Pages 1-3 Pages 17-19 Pages 22-25 Pages 12-17

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(C) identify the kinds of species that lived in the past and compare them to existing species.	FOSS Science Stories, Human Body FOSS Science Stories, Earth Materials	Pages 21-24 Page 4
(4.9) **Science concepts.** The student knows that many likenesses between offspring and parents are inherited or learned. The student is expected to:		
(A) distinguish between inherited traits and learned characteristics; and	Structures of Life, Investigation 3, Part 1 Structures of Life, Investigation 3, Part 2	Pages 12-14 Pages 18-30
(B) identify and provide examples of inherited traits and learned characteristics.	Structures of Life, Investigation 3, Part 1 Structures of Life, Investigation 3, Part 2	Pages 12-14 Pages 18-30
(4.10) **Science concepts.** The student knows that certain past events affect present and future events. The student is expected to:		
(A) identify and observe effects of events that require time for changes to be noticeable including growth, erosion, dissolving, weathering, and flow; and	Structures of Life, Investigation 1, Part 2 Structures of Life, Investigation 2, Part 1-3 Structures of Life, Investigation 4, Part 1-3 Water, Investigation 1, Part 3	Pages 22-27 Pages 11-24 Pages 10-24 Pages 21-27
(B) draw conclusions about "what happened before" using fossils or charts and tables.	FOSS Science Stories, Human Body FOSS Web Site	Pages 21-24 WWW.FOSSWEB.com Earth Materials, Pictures
(4.11) **Science concepts.** The student knows that the natural world includes earth materials and objects in the sky. The student is expected to:		
(A) test properties of soils including texture, capacity to retain water, and ability to support life;	Water, Investigation 4, Part 1 Water, Investigation 4, Part 4/Student Sheet #19	Pages 10-12 Pages 27-28
(B) summarize the effects of the oceans on land; and	FOSS Website FOSS Science Stories, Water FOSS Science Stories, Landforms*	WWW.FOSSWEB.com Models and Designs Pages 22-23 Pages 27-34

*This module was developed for use in either grade five or six.

Grade Five

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(5.1) **Scientific processes.** The student conducts field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to:		
(A) demonstrate safe practices during field and laboratory investigations; and	All FOSS modules are designed to include safe practices. Where special caution is needed, safety-warning statements are included as in: Mixtures and Solutions, Investigation 1, Part 1 Environments, Overview Landforms, Investigation 1, Part 1	 Page 11 Page 17 Page 9
(B) make wise choices in the use and conservation of resources and the disposal or recycling of materials.	FOSS Science Stories, Solar Energy Solar Energy, Overview/Science Background Environments, Investigation 5, Parts 1 –3 Mixtures and Solutions, Investigation 1, Part 1	 Pages 26-27 Pages 3-7 Pages 1 – 23 Page 11
(5.2) **Scientific processes.** The student uses scientific methods during field and laboratory investigations. The student is expected to:		
(A) plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology;	Variables, Investigation 3, Part 2 Environments, Investigation 6, Part 3	Pages 17 - 19 Pages 19-22
(B) collect information by observing and measuring;	Mixtures and Solutions, Investigation 2, Part 2 Food and Nutrition, Investigation 1, Parts 1-2 Food and Nutrition, Investigation 4, Part 1	Pages 18 – 20 Pages 8-20 Pages 8-15
(C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence;	Environments, Investigation 2, Part 3 Solar Energy, Investigation 2, Part 2	Pages 24 – 27 Pages 16-24
(D) communicate valid conclusions; and	Food and Nutrition, Investigation 1, Part 2 Solar Energy, Investigation 3, Part 1	Pages 16 – 23 Pages 8-16
(E) construct simple graphs, tables, maps, and charts to organize, examine and evaluate information.	Variables, Investigation 1, Part 3 Variables, Investigation 2, Part 2 Landforms, Investigation 1, Part 3 Landforms, Investigation 3, Part 1	Pages 23 – 26 Pages 14 –19 Pages 20 – 28 Pages 11-13

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(5.3) **Scientific processes.** The student uses critical thinking and scientific problem solving to make informed decisions. 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;	Variables, Investigation 3, Part 2 Food and Nutrition, Investigation 1, Part 2	Pages 14 -19 Pages 18-21
(B) draw inferences based on information related to promotional materials for products and services;	Food and Nutrition, Investigation 2, Part 2 Food and Nutrition, Investigation 3, Part 3	Pages 1 - 21 Pages 23-24
(C) represent the natural world using models and identify their limitations;	Landforms, Investigation 1, Part 1 Models and Designs, Investigation 1, Part 1 FOSS Science Stories, Models and Designs	Pages 8 – 15 Pages 12-16 Pages 1-10
(D) evaluate the impact of research on scientific thought, society, and the environment; and	Environments, Investigation 5, Parts 1 – 3 FOSS Science Stories, Environments FOSS Science Stories, Models and Designs	Pages 1 – 23 Page 36 Pages 25-36
(E) connect Grade 5 science concepts with the history of science and contributions of scientists.	FOSS Science Stories, Mixtures and Solutions FOSS Science Stories, Variables	Pages 7-10, 11-13, 26-33 Pages 21-28
(5.4) **Scientific processes.** The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:		
(A) collect and analyze information using tools including calculators, microscopes, cameras, sound recorders, computers, hand lenses, rulers, thermometers, compasses, balances, hot plates, meter sticks, timing devices, magnets, collecting nets, and safety goggles; and	FOSS Website Food and Nutrition, Investigation 4, Math Extensions Mixtures and Solutions, Investigation 1, Part 3 Landforms, Investigation 3, Part 3, Science Extension FOSS Website Mixtures and Solutions, Investigation 1, Part 3 Variables, Investigation 1, Part 1 Levers and Pulleys, Investigation 4, Part 2 Solar Energy, Investigation 1, Part 2 Food and Nutrition, Investigation 2, Part 2	Top of the FOSSWEB Student Home Page Pages 21-23 Pages 23-24 Page 27 Pages 23-24 Pages 12-15 Pages 15-20 Pages 15-21 Pages 8-15

	Solar Energy, Investigation 2, Part 2 Food and Nutrition, Investigation 1, Part 1 Levers and Pulleys, Investigation 1, Part 1 Variables, Investigation 1, Part 1 Models and Designs, Investigation 1, Science Extension Environments, Investigation 4, Part 1 Mixtures and Solutions, Investigation 4, Part 1	Pages 19-23 Pages 12-15 Pages 13-17 Pages 12-15 Page 28 Page 10 Page 10
(B) demonstrate that repeated investigations may increase the reliability of results.	Food and Nutrition, Investigation 1, Part 2 Food and Nutrition, Investigation 2, Part 2 Variables, Activity 1, Part 1	Pages 18-20 Pages 20-21 Pages 12-15
(5.5) **Science concepts.** The student knows that a system is a collection of cycles, structures, and processes that interact. The student is expected to:		
(A) describe some cycles, structures, and processes that are found in a simple system; and	Environments, Investigation 5, Part 3 Environments, Investigation 3, Part 1 Levers and Pulleys, Investigation 3, Part 1	Pages 20-22 Pages 11-13 Pages 11-13
(B) describe some interactions that occur in a simple system.	Levers and Pulleys, Investigation 3, Part 1 Variables, Investigation 1, Part 2	Pages 11-13 Pages 18-22
(5.6) **Science concepts.** The student knows that some change occurs in cycles. The student is expected to:		
(A) identify events and describe changes that occur on a regular basis such as in daily, weekly, lunar, and seasonal cycles;	Solar Energy, Investigation 1, Part 2 Variables, Investigation 1, Part 1 Science Stories, Solar Energy	Pages 17-21 Pages 12-15 Pages 8-9
(B) identify the significance of the water, carbon, and nitrogen cycles; and	Science Stories, Solar Energy Science Stories, Solar Energy FOSS Website	Pages 18-21 Pages 1-7 WWW.FOSSWEB.com Water & Environments Portions
(C) describe and compare life cycles of plants and animals.	Environments, Investigations 1-6 Environments, Investigation 1, Part 1 Environments, Investigation 2, Part 2 FOSS Website	All Parts Page 12-15 Pages 18-21 WWW.FOSSWEB.com Structures of Life

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(5.7) **Science concepts.** The student knows that matter has physical properties. The student is expected to:		
(A) classify matter based on its physical properties including magnetism, physical state, and the ability to conduct or insulate heat, electricity, and sound;	Mixture and Solutions, Investigation 1, Part 1 Solar Energy, Investigation 1, Part 2 Solar Energy, Investigation 3, Part 1 Models and Designs, Investigation 2, Part 1 FOSS Website	Pages 12-13 Pages 17-20 Pages 11-15 Pages 12-15 WWW.FOSSWEB.com Physics of Sound Location
(B) demonstrate that some mixtures maintain the physical properties of their ingredients;	Mixtures and Solutions, Investigation 1, Parts 1-2 Mixtures and Solutions, Investigation 1, Part 3	Pages 12-19 Pages 23-24
(C) identify changes that can occur in the physical properties of the ingredients of solutions such as dissolving sugar in water; and	Mixtures and Solutions, Investigation 1, Part 2 Mixtures and Solutions, Investigation 1, Part 3	Pages 18-20 Pages 23-24
(D) observe and measure characteristic properties of substances that remain constant such as boiling points and melting points.	Mixtures and Solutions, Investigation 2, Part 1-2 FOSS Science Stories, Variables	Pages 10-20 Pages 10-11
(5.8) **Science concepts.** The student knows that energy occurs in many forms. The student is expected to:		
(A) differentiate among forms of energy including light, heat, electrical, and solar energy;	Solar Energy, Investigation 4 Solar Energy, Investigation 4, Background FOSS Science Stories, Solar Energy	Student Sheet #27 & #28 Pages 6-7 Pages 1-5
(B) identify and demonstrate everyday examples of how light is reflected, such as from tinted windows, and refracted, such as in cameras, telescopes, and eyeglasses;	Solar Energy, Investigation 3, Part 1 FOSS Website	Pages 11-16 WWW.FOSSWEB.com Solar Energy Location
(C) demonstrate that electricity can flow in a circuit and can produce heat, light, sound, and magnetic effects; and	Models and Designs, Investigation 2, Part 1 & 2 FOSS Website	Pages 12-20 WWW.FOSSWEB.com Magnetism and Electricity Location

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(D) verify that vibrating an object can produce sound.	Models and Designs, Investigation 2, Part 1	Pages 12-15
(5.9) **Science concepts.** The student knows that adaptations may increase the survival of members of a species. The student is expected to:		
(A) compare the adaptive characteristics of species that improve their ability to survive and reproduce in an ecosystem;	Environments, Investigation 5, Parts 1-3	Pages 11-21
(B) analyze and describe adaptive characteristics that result in an organism's unique niche in an ecosystem; and	FOSS Science Stories, Environments Environments, Investigation 5, Parts 1-3	Pages 1-7 Pages 11-21
(C) predict some adaptive characteristics required for survival and reproduction by an organism in an ecosystem.	Environments, Science Stories Section	Page 5
(5.10) **Science concepts.** The student knows that likenesses between offspring and parents can be inherited or learned. The student is expected to:		
(A) identify traits that are inherited from parent to offspring in plants and animals; and	FOSS Science Stories, Environments FOSS Science Stories, Environments FOSS Science Stories, Food and Nutrition	Pages 43-45 Page 31-33 Page 16
(B) give examples of learned characteristics that result from the influence of the environment.	FOSS Science Stories, Food and Nutrition	Pages 24-25
(5.11) **Science concepts.** The student knows that certain past events affect present and future events. The student is expected to:		
(A) identify and observe actions that require time for changes to be measurable, including growth, erosion, dissolving, weathering, and flow;	Landforms, Investigation 2 & 3 Mixtures and Solution, Investigation 2, Part 1	Pages 11-22 Pages 10-13
(B) draw conclusions about "what happened before" using data such as from tree-growth rings and sedimentary rock sequences; and	FOSS Science Stories, Models and Designs	Pages 11-16
(C) identify past events that led to the formation of the Earth's renewable, non-renewable, and inexhaustible resources.	FOSS Science Stories, Solar Energy FOSS Website	Pages 1-2 WWW.FOSSWEB.com Water, Resources Simulation
(5.12) **Science concepts.** The student knows that the natural world includes earth materials and objects in the sky. The student is expected to:		
(A) interpret how land forms are the result of a combination of constructive and destructive forces such as deposition of sediment and weathering;	Landforms, Investigation 2, Parts 1-2 Landforms, Investigation 3, Parts 1-2	Pages 8-22 Pages 8-19

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	***FOSS INVESTIGATION/ ACTIVITY***	***PAGE NUMBER (S)***
(B) describe processes responsible for the formation of coal, oil, gas, and minerals;	FOSS Website FOSS Science Stories, Solar Energy Landforms, Overview	WWW.FOSSWEB.com Landforms Location Pages 1-3 Pages 3-7
(C) identify the physical characteristics of the Earth and compare them to the physical characteristics of the moon; and	FOSS Website	WWW.FOSSWEB.com Solar Energy Location
(D) identify gravity as the force that keeps planets in orbit around the Sun and the moon in orbit around the Earth.	FOSS Science Stories, Solar Energy FOSS Website	Pages 3- 4 WWW.FOSSWEB.com Solar Energy Location

Grade Six

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(6.1) **Scientific processes.** The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:		
(A) demonstrate safe practices during field and laboratory investigations; and	All FOSS modules are designed to include safe practices. Where special caution is needed, safety-warning statements are included as in: Levers and Pulleys, Overview Variables, Investigation 1, Part 1	 Page 17 Page 12
(B) make wise choices in the use and conservation of resources and the disposal or recycling of materials.	FOSS Science Stories, Solar Energy Solar Energy, Overview/Science Background Environments, Investigation 5, Parts 1 –3 Mixtures and Solutions, Investigation 1, Part 1	Pages 26-27 Pages 3-7 Pages 1 – 23 Page 11
(6.2) **Scientific processes.** The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:		
(A) plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology;	Food and Nutrition, Investigation 3, Parts 1-2 Solar Energy, Investigation 4, Parts 1-3	Pages 8-20 Pages 8-28
(B) collect data by observing and measuring;	Landforms, Investigation 4, Part 1 Levers and Pulleys, Investigation 4, Part 2	Pages 8-15 Pages 14-20
(C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence;	Models and Designs, Investigation 1, Parts 1-2 Levers and Pulleys, Investigation 1, Parts 1-3	Pages 8-21 Pages 8-28
(D) communicate valid conclusions; and	Variables, Investigation 1, Parts 1-3 Environments, Investigation 5, Parts 1 –3	Pages 8-27 Pages 8-22
(E) construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data.	Levers and Pulleys, Investigation 1, Parts 2-3 Environments, Investigation 1, Parts 1–2 Solar Energy, Investigation 4, Parts 1-3	Pages 18-28 Pages 8-19 Pages 8-28
(6.3) **Scientific processes.** The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:		

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;	Environments, Investigation 5, Parts 1 –3 Models and Designs, Investigation 1, Parts 1-2	Pages 8-22 Pages 8-21
(B) draw inferences based on data related to promotional materials for products and services;	Food and Nutrition, Investigation 2, Part 2 Food and Nutrition, Investigation 3, Part 3	Pages 1 - 21 Pages 23-24
(C) represent the natural world using models and identify their limitations;	Models and Designs, Investigation 3, Parts 1-3 Variables, Investigation 2, Parts 1-3	Pages 8-23 Pages 8-23
(D) evaluate the impact of research on scientific thought, society, and the environment; and	Food and Nutrition, Investigation 4, Parts 1-2 FOSS Science Stories, Solar Energy	Pages 8-20 Pages 22-24, 25, 26-27, 28-30, 31-32
(E) connect Grade 6 science concepts with the history of science and contributions of scientists.	FOSS Science Stories, Models and Designs FOSS Science Stories, Solar Energy	Pages 5-10 Pages 25, 28-30, 31-32
(6.4) **Scientific processes.** The student knows how to use a variety of tools and methods to conduct science inquiry. 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; and	Models and Designs, Investigation 1, Part 3 Levers and Pulleys, Investigation 4, Parts 1-2 Variables, Investigation 2, Part 1 Solar Energy, Investigation 2, Parts 1-2 Variables, Investigation 1, Part 1 Mixtures and Solutions, Investigation 2, Science Extensions Mixtures and Solutions, Investigation 4, Part 1 Levers and Pulleys, Investigation 1, Parts 1-3 Models and Designs, Investigation 1, Part 1 Mixtures and Solutions, Investigation 2, Part 1 FOSS Web Site Food and Nutrition, Investigation 2, Parts 1-3	Pages 22-25 Pages 8-20 Pages 8-13 Pages 8-24 Pages 8-15 Page 31 Page 10 Pages 8-28 Page 16 Pages 8-14 WWW.FOSSWEB.com Homepage Calculator Pages 8-25

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(B) identify patterns in collected information using percent, average, range, and frequency.	Food and Nutrition, Investigation 1, Part 2 Variables, Investigation 4, Part 3 Environments, Investigation 3, Part 3 Variables, Investigation 1, Parts 1-3	Page 20 Page 22 Pages 18-22 Pages 8-28
(6.5) **Scientific concepts.** The student knows that systems may combine with other systems to form a larger system. 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	FOSS Science Stories, Solar Energy Levers and Pulleys, Investigation 3, Part 2	Pages 18-21 Pages 16-20
(B) describe how the properties of a system are different from the properties of its parts.	FOSS Science Stories, Food and Nutrition Levers and Pulleys, Investigation 3, Part 2	Pages 6-9 Pages 16-20
(6.6) **Science concepts.** The student knows that there is a relationship between force and motion. The student is expected to:		
(A) identify and describe the changes in position, direction of motion, and speed of an object when acted upon by force;	Levers and Pulleys, Investigation 1, Part 1 Levers and Pulleys, Investigation 2, Part 3 Models and Designs, Investigation 3, Parts 2-3	Pages 8-17 Pages 18-22 Pages 13-23
(B) demonstrate that changes in motion can be measured and graphically represented; and	Levers and Pulleys, Investigation 4, Part 2 Levers and Pulleys, Investigation 1, Parts 2-3 Solar Energy, Investigation 1, Part 2	Pages 14-20 Pages 18-28 Pages 14-22
(C) identify forces that shape features of the Earth including uplifting, movement of water, and volcanic activity.	FOSS Science Stories, Landforms	Pages 27-34
(6.7) **Science concepts.** The student knows that substances have physical and chemical properties. The student is expected to:		
(A) demonstrate that new substances can be made when two or more substances are chemically combined and compare the properties of the new substances to the original substances; and	Mixtures and Solutions, Investigation 4, Parts 1-3	Pages 8-24
(B) classify substances by their physical and chemical properties.	Mixtures and Solutions, Investigation 1, Part 1 Mixtures and Solutions, Investigation 2, Part 3 Food and Nutrition, Investigation 1, Parts 1-2	Pages 8-15 Pages 20-24 Pages 8-20

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(6.8) **Science concepts.** The student knows that complex interactions occur between matter and energy. The student is expected to:		
(A) define matter and energy;	Food and Nutrition, Investigation 4, Part 1	Page 13
(B) explain and illustrate the interactions between matter and energy in the water cycle and in the decay of biomass such as in a compost bin; and	FOSS Science Stories, Solar Energy	Pages 1-5, 18-21
(C) describe energy flow in living systems including food chains and food webs.	FOSS Science Stories, Environments	Pages 27-35, 39-41
(6.9) **Science concepts.** The student knows that obtaining, transforming, and distributing energy affects the environment. The student is expected to:		
(A) identify energy transformations occurring during the production of energy for human use such as electrical energy to heat energy or heat energy to electrical energy;	FOSS Science Stories, Solar Energy Solar Energy, Investigation 3, Home/School Extension	Pages 22-24, 27, 29, 31-32 Page 28
(B) compare methods used for transforming energy in devices such as water heaters, cooling systems, or hydroelectric and wind power plants; and	FOSS Science Stories, Solar Energy Solar Energy, Investigation 3, Parts 1-2 Solar Energy, Investigation 4, Parts 1-3	Pages 22-24, 27, 29, 31-32 Pages 8-24 Pages 8-28
(C) research and describe energy types from their source to their use and determine if the type is renewable, non-renewable, or inexhaustible.	Solar Energy, Investigation 4, Part 1 FOSS Web Site or CDROM	Pages 8-19 Solar Energy Portion, Resource ID simulation
(6.10) **Science concepts.** The student knows the relationship between structure and function in living systems. The student is expected to:		
(A) differentiate between structure and function;	FOSS Science Stories, Environments	Pages 18-19, 20, 21, 22
(B) determine that all organisms are composed of cells that carry on functions to sustain life; and		
(C) identify how structure complements function at different levels of organization including organs, organ systems, organisms, and populations.	FOSS Science Stories, Environments FOSS Science Stories, Environments	Pages 18-19, 20, 21, 22 Pages 9-17
(6.11) **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. The student is expected to:		
(A) identify some changes in traits that can occur over several generations through natural occurrence and selective breeding;	FOSS Science Stories, Environments	Pages 43-44

TEXAS ESSENTIAL KNOWLEDGE AND SKILL ELEMENT	*FOSS INVESTIGATION/ ACTIVITY*	*PAGE NUMBER (S)*
(B) identify cells as structures containing genetic material; and	FOSS Science Stories, Models and Designs	Page 4
(C) interpret the role of genes in inheritance.	FOSS Science Stories, Models and Designs	Page 4
(6.12) **Science concepts.** The student knows that the responses of organisms are caused by internal or external stimuli. The student is expected to:		
(A) identify responses in organisms to internal stimuli such as hunger or thirst;	Environments, Investigation 4, Part 1-3	Pages 1-22
(B) identify responses in organisms to external stimuli such as the presence or absence of heat or light; and	Environments, Investigation 2, Part 1-4	Pages 10-30
(C) identify components of an ecosystem to which organisms may respond.	Environments, Investigation 1, Parts 1-2 Environments, Investigation 4, Part 1-3	Pages 8-19 Pages 1-22
(6.13) **Science concepts.** The student knows components of our solar system. The student is expected to:		
(A) identify characteristics of objects in our solar system including the Sun, planets, meteorites, comets, asteroids, and moons; and	FOSS Science Stories, Solar Energy FOSS Web Site or CDROM	Pages 1-5 WWW.FOSSWEB.com Pictures & diagrams of Solar System
(B) describe types of equipment and transportation needed for space travel.	FOSS Science Stories, Models and Designs	Pages 37-40
(6.14) **Science concepts.** The student knows the structures and functions of Earth systems. The student is expected to:		
(A) summarize the rock cycle;		
(B) identify relationships between groundwater and surface water in a watershed; and	FOSS Science Stories, Landforms	Pages 15-22
(C) describe components of the atmosphere, including oxygen, nitrogen, and water vapor, and identify the role of atmospheric movement in weather change.	FOSS Science Stories, Solar Energy	Pages 18-21