



Grade 1 Science Scope and Sequence

PROFILE

Science is a way of knowing and experiencing the natural world. It is a social and intellectual endeavor that provides the foundation for lifelong informed decision-making, problem-solving, improved quality of life and technological advances. Learning science is an active process, and all students should have access to challenging, relevant, exciting, "hands-on," and content-rich science experiences.

OUR CURRICULUM

The Conroe Independent School District offers students a challenging science curriculum that utilizes inquiry and discovery models of instruction which provide opportunities for all students to participate and master science concepts. Students will experience the richness of science through hands-on laboratory and field investigations through inquiry and active experimentation. Emphasized science process skills include: observing, measuring, identifying, classifying, predicting, comparing, inferring, and drawing conclusions. Students will also develop a proficient use of technology through analyzing and collecting data for real world science applications. Our science curriculum is based on the Texas Essential Knowledge and Skills (TEKS) curriculum framework.

CURRICULUM & INSTRUCTION STAFF

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EXPECTATIONS



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1. Tools of Science

The students will be able to gather, analyze, and interpret information using selected equipment and tools to extend the senses. *Measuring cups and spoons, computers, hand lenses, metric rulers, thermometers, balances, magnets, collection nets, meter sticks, clocks, and safety goggles are used in Grade 1 Science.*

2. Vocabulary

The student will build and expand vocabulary, through a print-rich environment, to increase fluency and understanding by incorporating scientific vocabulary into their everyday speaking, listening, and writing routines.

3. Content Integration

The student will read a variety of texts to gain information and write to inform using correct sentence structure, capitalization, punctuation, spelling, and usage. The student will also draw a picture, complete a graph, and label a graphic aide.

4. The student will...

- a. Demonstrate safe practices
- b. Ask questions
- c. Plan and conduct simple, descriptive investigations
- d. Compare results with those of other investigators
- e. Use equipment and tools to extend the senses
- f. Communicate feelings
- g. Give explanations based on information
- h. Measure and compare using standard and nonstandard units
- i. Make decisions using information
- j. Justify merits of decision
- k. Explain a problem and propose a solution

TEKS CORRELATIONS



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Some Student Expectations (SEs) have been correlated to other grade level TEKS objectives.

EXAMPLE

39. Identify the needs of animals. (TEKS 1.9A / **TEKS 2.9A** / **TEKS 5.9A**)

These correlations have been directly linked to possible objectives on the Grade 5 Science TAKS test. In addition, the correlations identify the progression of concepts throughout the grade levels.

TEKS EXTENSIONS

Vocabulary is a critical factor in the mastery of science concepts. Over time, repeated and consistent exposure to vocabulary will increase the chances of a learner's ability to master concepts. In addition, providing students with the opportunities to make these connections between vocabulary and concepts will foster ownership of their learning.

EXAMPLE

21. Identify and demonstrate everyday examples of how light is reflected and refracted.
(TEKS 1.7A, B / TEKS 5.8B)*

If time permits, Student Expectations (SEs) that have an asterisk (*) should be addressed as an extension. Students are not necessarily required to master these objectives; however, the exposure to the vocabulary will provide prior knowledge in the subsequent years.

SCIENCE PROCESS SKILLS



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Throughout the year, students will master certain required skills. These skills are important to a student's understanding of the nature of science. **The Science Process Skills are not designed to be taught in isolation.** They are to be embedded in each instructional unit and some should be practiced each time science is taught.

Science Process Skills are the same for every grade level (Grade K – Grade 5). At each grade level, however, the teacher is expected to approach the skill at the level appropriate for their students' age, grade, and cognitive development.

The student will:

1. Demonstrate safe and ethical practice in school, field, and home. **(TEKS 1.1A / TEKS 2.1A / TEKS 3.1A / TEKS 4.1A / TEKS 5.1A)**
2. Use and dispose of materials wisely, conserve and recycle materials and resources when possible. **(TEKS 1.1B)**
3. Plan and implement descriptive investigations. **(TEKS 1.2B / TEKS 5.2A)**
4. Isolate variables and conduct controlled experiments; repeat experiments to demonstrate that repetition increases reliability of results. **(TEKS 3.4B)**
5. Collect data by observing and measuring. **(TEKS 1.4A / TEKS 5.2B)**
6. Gather, analyze, and interpret information using selected equipment and tools to extend the senses, including measuring cups and spoons, hand lenses, metric rules, thermometers, magnets, balances, collection nets, meter sticks, non-standard measuring units, clocks, and safety goggles. **(TEKS 1.2C / TEKS 1.4A, C / TEKS 5.4A)**
7. Record data through graphic works including simple graphs, tables, maps, charts. **(TEKS 1.2E / TEKS 5.2E)**
8. Draw inferences, in particular with regards to the validity of advertising, and analyze information. **(TEKS 1.3A, B / TEKS 3.3B)**
9. Classify, analyze, and interpret information to make and justify decisions and construct reasonable explanations. **(TEKS 1.2D / TEKS 5.2C)**
10. Communicate problems, propose solutions, ask questions, record results, and conclusions in a student's own words. **(TEKS 1.2A, D, E / TEKS 1.3C / TEKS 5.2D)**
11. Analyze, review, and critique scientific explanations, hypotheses, and theories as to strengths and weaknesses. **(TEKS 1.3B / TEKS 3.3A)**
12. Represent the natural world using models and identify their limitations. **(TEKS 3.3C)**
13. Evaluate the impact of research on scientific thought, society, and the environment. **(TEKS 3.3D)**
14. Connect grade level science concepts with the history of science and contributions of scientists. **(TEKS 3.3E / TEKS 4.3E / TEKS 5.3E)**



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FIRST NINE WEEKS

SCIENCE PROCESS SKILLS SHOULD BE PRACTICED EACH TIME SCIENCE IS TAUGHT.

VOCABULARY			STUDENT EXPECTATIONS (SEs)	RESOURCES / ACTIVITIES
NOUNS	VERBS			
		Week 1	SCIENCE IS EVERYWHERE!	<i>Science Is Everywhere</i> packet KEY: US = United Streaming LL = Literature Links WEB = Web Site Link HC = Harcourt Reading series FC = First Class Lesson
patterns properties sort	create identify predict sort	Week 2	PATTERNS AND SORTING 1. Identify patterns including those seen in charts, graphs, and numbers. (TEKS 1.5B) 2. Predict patterns including those seen in charts, graphs, and numbers. (TEKS 1.5B) 3. Create patterns including those seen in charts, graphs, and numbers. (TEKS 1.5B) 4. Sort objects based on properties and patterns. (TEKS 1.5A)	LL: <i>Caps for Sale</i> (Slobodkina) LL: <i>One White Sail</i> (Garne) HC: "I Wonder" US: Sorting and Grouping
hear senses sight smell taste touch	identify	Week 3	THE SENSES 5. Identify the five senses. (TEKS 1.9A)	Harcourt Science Unit A – Ch. 1 Lesson 1 LL: <i>My Five Senses</i> (Aliki) US: The Fabulous Five
hard matter solid	sort	Week 4	INVESTIGATING MATTER – SOLIDS 6. Sort solid objects based on properties and patterns. (TEKS 1.5A)	Harcourt Science Unit E – Ch. 1 Lesson 1 LL: <i>Water as a Solid</i> (Frost) WEB: Matter Matters US: Properties of Matter Part 1
clear float liquid sink water	identify measure observe record	Week 5	INVESTIGATING MATTER – LIQUIDS 7. Observe, measure, and record properties of liquids. (TEKS 1.5A) 8. Observe and identify objects that float or sink. (TEKS 1.7A)	Harcourt Science Unit E – Ch. 1 Lessons 2-3 LL: <i>Stone Soup</i> LL: <i>Water as a Liquid</i> (Frost) US: MSB Ups and Downs



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air gas steam	observe measure record	Week 6	<p style="text-align: center;">INVESTIGATING MATTER – GASES</p> 9. Observe, measure, and record properties of gases. (TEKS 1.5A) 10. Observe, measure, and record properties of gases. (TEKS 1.5A / TEKS 4.6A / TEKS 5.7A)	Harcourt Science Unit E – Ch. 1 Lesson 4 LL: <i>Grumpalump</i> (Hayes) LL: <i>Feel the Wind</i> (Dorros) LL: <i>Air Is All Around You</i> (Branley)
bend change freeze melt pour	measure observe record	Week 7	<p style="text-align: center;">CHANGES IN MATTER</p> 11. Observe, measure, and record changes in matter. (TEKS 1.7A)	Harcourt Science Unit E – Ch. 1 Lesson 5 LL: <i>Gregory the Terrible Eater</i> US: Properties of Matter Part 2
direction force move path position pull push	identify investigate observe record	Week 8	<p style="text-align: center;">FORCES – PUSH AND PULL</p> 12. Identify that a force is a push or a pull. (TEKS 1.7A / TEKS 3.6A) 13. Investigate pushes and pulls. (TEKS 1.7A) 14. Observe and record how objects move. (TEKS 1.7A) 15. Observe changes in the position and direction of an object. (TEKS 1.7A / TEKS 3.6A)	Harcourt Science Unit F – Ch. 1 Lessons 1-3 LL: <i>Push and Pull</i> (Murphy) US: How Things Move
		Week 9	REVIEW CONCEPTS	



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SECOND NINE WEEKS

SCIENCE PROCESS SKILLS SHOULD BE PRACTICED EACH TIME SCIENCE IS TAUGHT.

VOCABULARY			STUDENT EXPECTATIONS (SEs)	RESOURCES / ACTIVITIES
NOUNS	VERBS			
friction motion rough smooth speed start stop surface wheel	identify investigate measure observe record	Week 1	<p align="center">HOW DO OBJECTS MOVE ON SURFACES?</p> 16. Identify friction as a force that makes it harder to move things. (TEKS 1.7A) 17. Observe, measure, and record how different objects move on smooth and rough surfaces. (TEKS 1.7A) 18. Investigate how wheels help move objects. (TEKS 1.7A)	<u>Harcourt Science</u> Unit F – Ch. 1 Lessons 4-5 LL: <i>How Things Move</i> (Curry) US: MSB Plays Ball
cut parts tear whole	identify manipulate	Week 2	<p align="center">INVENTIONS</p> 19. Identify parts that, when put together, can do things they cannot do by themselves. (TEKS 1.6D / TEKS 5.5A / TEKS 5.5B) 20. Manipulate objects such as toys, vehicles, or flashlights so that the parts are separated from the whole which may result in the part or the whole not working. (TEKS 1.6C)	<u>Harcourt Science</u> Unit E – Ch. 1 Lesson 6 LL: <i>Big Machines</i> (Wallace) HC: “My Robot”
cold color heat hot light shadow sun	demonstrate identify recognize test	Week 3	<p align="center">HEAT AND LIGHT</p> 21. Identify and test ways that heat may cause change such as when ice melts. (TEKS 1.7B / TEKS 5.7D) 22. Recognize the importance of light. (TEKS 1.7A) 23. Identify and demonstrate everyday examples of how light is reflected and refracted. (TEKS 1.7A / TEKS 5.8B)*	<u>Harcourt Science</u> Unit E – Ch. 2 Lessons 1-4 LL: <i>My Shadow</i> (Stevenson) US: MSB Gets a Bright Idea
clouds fog rain temperature thermometer weather wind	investigate observe record	Week 4	<p align="center">MEASURING WEATHER</p> 24. Investigate different types of weather. (TEKS 1.7C) 25. Observe and record changes in weather from day to day. (TEKS 1.7C / TEKS 4.6A / TEKS 5.6A)	<u>Harcourt Science</u> Unit D – Ch. 1 Lessons 1-4 LL: <i>Weather Words</i> (Gibbons) LL: <i>Cloudy with a Chance of Meatballs</i> LL: <i>It Looked Like Spilt Milk</i> US: Weather: A First Look



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fish fresh gills lake ocean pond river salt streams	describe explain identify	Week 5	EARTH'S WATER 26. Identify and describe a variety of natural sources of water including streams, lakes, rivers, and oceans. (TEKS 1.10A) 27. Identify the characteristics of different fish that allow their needs to be met. (TEKS 1.9A / TEKS 2.9A / TEKS 5.9A) 28. Explain the differences between fresh water and salt water. (TEKS 1.10A)	Harcourt Science Unit C – Ch. 2 Lessons 2-3 LL: <i>Where do puddles go?</i> LL: <i>In the Small, Small Pond</i> (D. Fleming) LL: <i>What is a...? series</i> (Schaefer) LL: <i>Life in the Pond</i> (Cunan) LL: <i>Rainbow Fish</i> HC: "The Beach" US: MSB Takes a Dive US: Water: A First Look
condensation evaporation precipitation water cycle	identify	Week 6	WATER CYCLE 29. Identify how water is used in our everyday lives such as drinking, cleaning, and taking care of plants. (TEKS 1.10C) 30. Identify how water can be recycled through the water cycle. (TEKS 1.10C)	Harcourt Science Unit D – Ch. 1 Lessons 3-4 LL: <i>Where do puddles go?</i> (Faye Robinson) HC: "The Puddle" US: MSB Wet All Over US: Peep Series: Stormy Weather
cold cool fall season winter	change observe record	Week 7	THE SEASONS – FALL AND WINTER 31. Observe and record changes in weather associated with the <u>fall</u> season. (TEKS 1.7C) 32. Observe and record changes in weather associated with the <u>winter</u> season. (TEKS 1.7C)	Harcourt Science Unit D – Ch. 2 Lessons 3-4 LL: <i>Fall is not Easy</i> (Marty Kelley) LL: <i>The Seasons of My Apple Tree</i> LL: <i>Why do the leaves change color?</i> (Maestro) LL: <i>Snowy Day</i> (Keats) LL: <i>We're Going On a Leaf Hunt</i> (Metzger) LL: <i>MSB The Wild Leaf Ride</i> (Cole) HC: "Feeding Wild Birds" (PPR1-5) US: Seasons with Birds series
		Week 8	REVIEW CONCEPTS	
		Week 9	REVIEW CONCEPTS	

THIRD NINE WEEKS



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SCIENCE PROCESS SKILLS SHOULD BE PRACTICED EACH TIME SCIENCE IS TAUGHT.

VOCABULARY				STUDENT EXPECTATIONS (SEs)	RESOURCES / ACTIVITIES
NOUNS	VERBS				
dull rock sand shiny	describe identify observe	Week 1		<p style="text-align: center;">EARTH'S LAND – ROCKS</p> 33. Observe and describe differences in rock samples. (TEKS 1.10B / TEKS 4.11A) 34. Identify how rocks are used and how they can be recycled. (TEKS 1.10C)	<u>Harcourt Science</u> Unit C – Ch. 1 Lesson 1 LL: <i>MSB Inside the Earth</i> (Cole) HC: "A Rock for Rick" US: Rocks: Solid Earth Materials #1 US: MSB Rocks and Rolls US: MSB Shows and Tells
clay soil texture topsoil	describe identify observe	Week 2		<p style="text-align: center;">EARTH'S LAND – SOIL</p> 35. Observe and describe differences in soil samples. (TEKS 1.10B / TEKS 4.11A) 36. Identify how soil is used and how it can be recycled. (TEKS 1.10C)	<u>Harcourt Science</u> Unit C – Ch. 1 Lessons 2-3 US: Getting to Know Soil
living nonliving	compare group	Week 3		<p style="text-align: center;">LIVING AND NONLIVING</p> 37. Group living organisms and nonliving objects. (TEKS 1.8A) 38. Compare living organisms and nonliving objects. (TEKS 1.8B)	<u>Harcourt Science</u> Unit A – Ch. 1 Lesson 2 LL: <i>Diary of a Worm</i> (Cronin) US: Living and Nonliving Things
air food needs shelter water	identify	Week 4		<p style="text-align: center;">NEEDS OF ANIMALS</p> 39. Identify the needs of animals such food, water, air, and shelter. (TEKS 1.9A / TEKS 2.9A / TEKS 5.9A)	<u>Harcourt Science</u> Unit A – Ch. 3 Lesson 1 LL: <i>Animals</i> (Strickland) US: Everybody Needs Shelter
birth fur mammal warm blooded young	compare describe group identify	Week 5		<p style="text-align: center;">MAMMALS</p> 40. Identify the characteristics of different mammals that allow their needs to be met. (TEKS 1.9A / TEKS 2.9A / TEKS 5.9A) 41. Describe and group different kinds of mammals. (TEKS 1.8A) 42. Compare different kinds of mammals. (TEKS 1.8B)	<u>Harcourt Science</u> Unit A – Ch. 3 Lesson 2 LL: <i>What is a mammal?</i> (Schaefer) LL: <i>Polar Bear Cubs</i> (Matthews) HC: "Animals On The Go" US: Junior Zoologist: Mammals US: Mammals #1 WEB: Beary Fun Activities



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abdomen head insect thorax	identify	Week 6	INSECTS 43. Identify the characteristics of insects that allow their needs to be met. (TEKS 1.9A)	Harcourt Science Unit A – Ch. 3 Lesson 3 LL: <i>Hey Little Ant</i> LL: <i>What is an insect?</i> (Shaefer) HC: “Lost” HC: “What Day Is It?” US: Insects US: Insect Lifecycles: Metamorphosis US: MSB Ants in Its Pants US: MSB In a Beehive
butterfly caterpillar chrysalis larva life cycle metamorphosis pupa	observe record	Week 7	LIFE CYCLES – BUTTERFLY 44. Observe and record the stages in the life cycle of a butterfly . (TEKS 1.7D / TEKS 5.6C)	Harcourt Science Unit A – Ch. 3 Lesson 5 LL: <i>Clara Caterpillar</i> LL: <i>Very Hungry Caterpillar</i> (Carle) LL: <i>From Caterpillar to Butterfly</i> (Heiligman) US: Caterpillar and Polliwog US: MSB Butterfly and the Bog Beast
adult amphibian frog pollywog tadpole	identify observe record	Week 8	LIFE CYCLES – FROG 45. Identify the characteristics of different amphibians that allow their needs to be met. (TEKS 1.9A / TEKS 2.9A / TEKS 5.9A) 46. Observe and record stages in the life cycle of a frog. (TEKS 1.7D / TEKS 5.6C)	Harcourt Science Unit A – Ch. 3 Lesson 6 LL: <i>What is an amphibian?</i> (Shaefer) LL: <i>Fantastic Frogs!</i> (Robinson) HC: “Frog and Toad All Year” HC: “Where Do Frogs Come From” HC: “Why the Frog Has Big Eyes” HC: “The Absent-Minded Toad” US: A Boy, A Dog, and His Frog US: MSB Hops Home
rainbow spring summer	observe record	Week 9	THE SEASONS – SPRING AND SUMMER 47. Observe and record changes in weather associated with the spring season. (TEKS 1.7C) 48. Observe and record changes in weather associated with the summer season. (TEKS 1.7C)	Harcourt Science Unit D – Ch. 2 Lessons 1-2 LL: <i>My Spring Robin</i> (Rockwell) LL: <i>A Rainbow of My Own</i> US: MSB Makes a Rainbow



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FOURTH NINE WEEKS

SCIENCE PROCESS SKILLS SHOULD BE PRACTICED EACH TIME SCIENCE IS TAUGHT.

VOCABULARY			STUDENT EXPECTATIONS (SEs)	RESOURCES / ACTIVITIES
NOUNS	VERBS			
flower leaves pollen root root hair seed stem	describe identify	Week 1	<p align="center">PARTS OF A PLANT</p> 49. Identify the parts of a plant. (TEKS 1.6B) 50. Describe the functions of plant parts. (TEKS 1.6B)	<u>Harcourt Science</u> Unit A – Ch. 2 Lesson 1 LL: <i>The Vegetable We Eat</i> (Gibbons) US: Plant Parts and Their Uses
bulb ground grow scatter seed coat sprout	identify record	Week 2	<p align="center">HOW PLANTS GROW</p> 51. Identify and record the stages of how plants grow. (TEKS 1.7D / TEKS 5.6C)	<u>Harcourt Science</u> Unit A – Ch. 2 Lesson 2 LL: <i>How a Seed Grows</i> (Jordan) LL: <i>Tops and Bottoms</i> (Stevens) LL: <i>Rainbow Garden</i> (Carle) HC: “Digger Pig and the Turnip” US: Debbie Greenthumb: How Plants Grow US: MSB Gets Planted
air soil sunlight water	identify	Week 3	<p align="center">NEEDS OF PLANTS</p> 52. Identify the needs of plants. (TEKS 1.9A / TEKS 2.9A / TEKS 5.9A)	<u>Harcourt Science</u> Unit A – Ch. 2 Lesson 3 LL: <i>Tiny Seed</i> (Carle) US: MSB Goes to Seed
daylight diurnal nighttime nocturnal	identify	Week 4	<p align="center">DIURNAL / NOCTURNAL ANIMALS</p> 53. Identify diurnal [daytime] animals such as butterflies, humans, and most pets. (TEKS 1.8A) 54. Identify nocturnal [nighttime] animals such as bats, owls, moths, and mice. (TEKS 1.8A)	LL: <i>Sun Up, Sun Down</i> (Gibbons) LL: <i>Stellaluna</i> LL: <i>Night Creatures</i> (Peyrols) US: MSB Sees Stars US: MSB Going Batty



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canopy Earth Day emergent forest floor rain forest recycle reduce reuse under story	describe identify provide	Week 5	WHERE PLANTS AND ANIMALS LIVE – RAIN FOREST 55. Identify and describe rain forest habitats. (TEKS 1.9A, B) 56. Identify the characteristics of different birds that allow their needs to be met. (TEKS 1.9A / TEKS 2.9A / TEKS 5.9A) 57. Provide examples of characteristics of living organisms that allow their basic needs to be met in a rainforest. (TEKS 1.9A, B)	Harcourt Science Unit B – Ch. 2 Lesson 3 LL: <i>The Lorax</i> (Seuss) LL: <i>The Umbrella</i> (Brett) LL: <i>The Kapok Tree</i> (Cherry) LL: <i>If I Ran The Rain Forest</i> (Worth) LL: <i>What is a bird?</i> (Schaefer) LL: <i>MSB Gets Recycled</i> (Cole) HC: “Baboon” US: MSB In the Rain Forest WEB: Forest in a Jar
forest tree	describe identify provide	Week 6	WHERE PLANTS AND ANIMALS LIVE – FORESTS 58. Identify and describe forest habitats. (TEKS 1.9A, B) 59. Provide examples of characteristics of living organisms that allow their basic needs to be met in a forest. (TEKS 1.9A, B)	Harcourt Science Unit B – Ch. 2 Lesson 1 LL: <i>Tell Me, Tree</i> (Gibbons) HC: “Little Bear” HC: “Splash!”
arid cactus desert reptile sand	describe identify provide	Week 7	WHERE PLANTS AND ANIMALS LIVE – DESERT 60. Identify and describe desert habitats. (TEKS 1.9A, B) 61. Identify the characteristics of different reptiles that allow their needs to be met. (TEKS 1.9A / TEKS 2.9A / TEKS 5.9A) 62. Provide examples of characteristics of living organisms that allow their basic needs to be met in a desert. (TEKS 1.9A, B)	Harcourt Science Unit B – Ch. 2 Lesson 2 LL: <i>What is a reptile?</i> (Schaefer) US: Desert Habitats LL: <i>Cactus Hotel</i> (Guiberson) LL: <i>Desert Giant</i> (Bash) US: MSB Cold Feet US: MSB All Dried Up
food needs shelter wants	compare give	Week 8	PEOPLE NEED PLANTS AND ANIMALS 63. Compare and give examples of the ways people depend on plants and animals for their basic needs. (TEKS 1.9B / TEKS 2.9B)	Harcourt Science Unit B – Ch. 1 Lessons 1-3
		Week 9	REVIEW CONCEPTS	