

# TEXAS ESSENTIAL KNOWLEDGE AND SKILLS

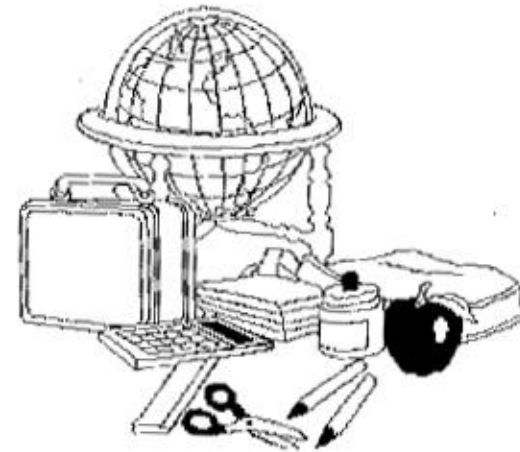
(TEKS)

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## LEARNING STANDARDS FOR TEXAS CHILDREN

A SUMMARY FOR PARENTS

## MATHEMATICS

In fifth grade mathematics, your child will learn:

### NUMBERS, OPERATIONS, AND QUANTITATIVE REASONING. Students:

- read, write, compare, and order whole numbers through billions;
- read, write, compare, and order decimals through thousandths;
- generate equivalent fractions;
- compare fractions in a variety of ways;
- relate decimals to fractions using models to the thousandths;
- add, subtract, multiply, and divide whole numbers;
- add and subtract decimals;
- identify prime and common factors;
- model adding and subtracting fractions like denominators;
- round whole numbers and decimals to tenths; and
- estimate to solve problems.

### PATTERNS, RELATIONSHIPS, AND ALGEBRAIC THINKING. Students:

- determine all possible combinations;
- use patterns to make generalizations;
- identify prime and composite numbers; and
- select and use diagrams and number sentences.

### GEOMETRY AND SPATIAL REASONING. Students:

- identify critical attributes of geometric figures or solids;
- use critical attributes to define shapes and solids;
- sketch translations, rotations, and reflections;
- describe transformations that relate congruent figures; and
- graph ordered pairs of whole numbers.

### MEASUREMENT. Students:

- measure volume using concrete models;
- estimate volume in cubic units; and
- measure length, perimeter, weight, capacity, time, temperature, and area to solve problems and describe equivalent measures.

### PROBABILITY AND STATISTICS. Students:

- construct line graphs;
- describe characteristics of a set of data;
- graph data using the appropriate representation;
- use fractions to describe results of an experiment; and
- use results to make predictions.

### PROBLEM SOLVING. Students:

- identify the mathematics in everyday situations;
- use a problem-solving model that incorporates understanding the problem, making and carrying out the plan, and evaluating the solution for reasonableness;
- select or develop an appropriate problem-solving strategy;
- explain and record observations;
- relate informal language to mathematical language and symbols;
- make generalizations from patterns; and
- justify why an answer is reasonable and explain the solution process.

## SCIENCE

In fifth grade science, your child will learn:

### FIELD AND LABORATORY INVESTIGATIONS. Students:

- demonstrate safe, environmentally appropriate, and ethical practices; and
- learn to use and conserve, dispose and recycle resources.

### SCIENTIFIC INQUIRY. Students:

- plan and implement investigations, ask well-defined questions, formulate hypotheses, select and use equipment, collect, analyze and interpret information, observe and measure, and communicate valid conclusions; and
- construct graphs, maps, charts to organize and evaluate information.

### CRITICAL THINKING, PROBLEM SOLVING, AND DECISION-MAKING SKILLS. Students:

- analyze scientific explanations as to strengths and weaknesses;
- draw inferences on promotional materials;
- represent the natural world using models;
- evaluate research on scientific thought, society, and the environment; and
- connect concepts with history of science and contributions of scientists.

### TOOLS AND MODELS. Students:

- use scientific methods and tools, including sound recorders, computers, hand lenses, thermometers, compasses, balances, magnets, meter sticks, collecting nets, and safety goggles to collect information; and
- show that repeated investigations may increase reliability of results.

### SYSTEMS, CYCLES, AND CHANGE. Students:

- describe cycles, structures, interactions, and processes found in systems and life cycles; and
- identify events and describe changes that occur on a regular basis and the significance of water, carbon, and nitrogen cycles.

### MATTER AND ENERGY. Students:

- investigate physical states of matter;
- describe light, sound, heat, and electricity as forms of energy;
- demonstrate how some mixtures and solutions maintain physical properties of their ingredients; and
- differentiate forms of energy including light, heat, electrical, and solar.

### ADAPTATION. Students:

- explore and predict adaptations;
- describe an organism's niche within an ecosystem;
- examine traits that are inherited by offspring from their parents; and
- study examples of learned characteristics.

### PAST AND FUTURE EVENTS. Students:

- see that growth, erosion, and dissolving are examples of past events that have affected present events.

### PROCESSES OF THE NATURAL WORLD—EARTH MATERIALS AND OBJECTS IN THE SKY. Students:

- interpret how landforms develop;
- describe processes responsible for coal, gas, and minerals;
- compare physical characteristics of the Earth and Moon; and
- identify gravity as a force that keeps planets and the Moon in orbit.

## MATHEMATICS

In fourth grade mathematics, your child will learn:

### NUMBER, OPERATION, AND QUANTITATIVE REASONING. Students:

- read, write, compare, and order whole numbers through millions;
- read, write, compare, and order decimals through hundredths;
- model fractions greater than one;
- generate equivalent fractions using models;
- compare and order fractions using concrete and picture models;
- relate fractions and decimals for tenths and hundredths;
- add and subtract whole numbers and decimals to hundredths;
- model factors and products;
- represent multiplication and division;
- recall and apply multiplication facts;
- multiply with two-digit multipliers;
- divide with a one-digit divisor;
- use addition and subtraction to solve problems;
- round to ten, hundred, or thousand; and
- estimate products and quotients.

### PATTERNS, RELATIONSHIPS, AND ALGEBRAIC THINKING. Students:

- use patterns to remember multiplication facts;
- solve division problems using fact families;
- use patterns to multiply by 10 and 100; and
- describe the relationship between two sets of data.

### GEOMETRY AND SPATIAL REASONING. Students:

- use formal language for angles;
- identify parallel and perpendicular lines;
- describe shapes and solids with vertices, edges, and faces;
- demonstrate translations, reflections, and rotations;
- verify congruence and symmetry; and
- locate and name whole numbers, fractions, and decimals on number line.

### MEASUREMENT. Students:

- estimate and measure weight and capacity; and
- measure length, perimeter, time, temperature, and area.

### PROBABILITY AND STATISTICS. Students:

- interpret bar graphs;
- list possible outcomes of a probability experiment; and
- use a pair of numbers to describe the probability of an event.

### PROBLEM SOLVING. Students:

- identify the mathematics in everyday situations;
- use a problem-solving model;
- select or develop an appropriate problem-solving strategy;
- explain and record observations;
- relate informal language to mathematical language and symbols; and
- make generalizations from patterns.

## SCIENCE

In fourth grade science, your child will learn:

### FIELD AND LABORATORY INVESTIGATIONS. Students:

- demonstrate safe, environmentally appropriate, and ethical practices; and
- learn to use and conserve, dispose and recycle resources.

### SCIENTIFIC INQUIRY. Students:

- plan and implement descriptive and simple investigations, ask well-defined questions, formulate hypotheses, select and use appropriate equipment and technology, collect, analyze and interpret information, observe and measure, and communicate valid conclusions; and
- construct graphs, tables, maps, charts to organize, examine, and evaluate information.

### CRITICAL THINKING, PROBLEM SOLVING, AND DECISION MAKING

#### SKILLS. Students:

- analyze, review, and critique scientific explanations/hypotheses/theories, including strengths and weaknesses, and draw inferences on promotional materials for products and services;
- evaluate research on scientific thought, society, and the environment; and
- connect science concepts with history of science and contributions of scientists.

#### TOOLS AND MODELS. Students:

- collect information, measure, and compare using tools, including safety goggles, microscopes, sound recorders, computers, hand lenses, thermometers, meter sticks, balances, and compasses;
- represent the natural world using models and analyze their limitations; and
- demonstrate that repeated investigations may increase the reliability of results.

#### SYSTEMS, CYCLES, PATTERNS, AND CHANGE. Students:

- identify and describe roles of organisms in living systems and parts in non-living objects and predict and draw conclusions when part of a system is removed; and
- identify patterns of change and use reflection to verify symmetry.

#### MATTER AND PHYSICAL PROPERTIES. Students:

- observe and record changes in states of matter caused by heat and conduct tests, compare data, and draw conclusions about physical properties of matter-states, conduction, density, and buoyancy.

#### ADAPTATIONS. Students:

- identify characteristics that allow survival and reproduction of species;
- compare adaptive characteristics of species and identify and compare species that lived in the past to existing species; and
- distinguish inherited and learned characteristics providing examples.

#### PAST, PRESENT, AND FUTURE EVENTS. Students:

- identify and observe effects of events that require time for change to become noticeable.

#### PROCESSES OF THE NATURAL WORLD. Students:

- test properties of soils, effects of oceans on land, and the Sun as our major source of energy.

## ENGLISH LANGUAGE ARTS & READING

In fourth grade language arts, your child will learn:

### LISTENING/SPEAKING. Students:

- listen to gain information and supporting evidence;
- monitor their understanding of a spoken message and appropriately seek clarification;
- interpret speaker's messages (both verbal and nonverbal), purposes and perspectives; and
- monitor their own understanding of the spoken message and seek clarification as needed.

### READING. Students:

- read and comprehend a variety of fourth-grade level texts;
- adjust reading rate according to the purpose for reading;
- monitor their own comprehension and reread, use reference aids, search for clues, and ask questions when understanding breaks down;
- use multiple reference aids, including software, to clarify and seek information;
- study word meanings across content areas and through current events;
- respond to readings and ideas through journal writing, discussion, and media;
- paraphrase and summarize text;
- represent text information by generating outlines, timelines, and graphics; and
- offer observations, make connections, react, speculate, interpret, and raise questions after reading.

### WRITING. Students:

- capitalize, use punctuation, and spell correctly in "published" pieces of writing;
- evaluate written compositions using assigned and established criteria;
- conduct research and raise new questions for further investigation;
- write to express, discover, record, develop, reflect on ideas, and problem solve; and
- compose journals, letters, reviews, poems, narratives and instructions.

### VIEWING/REPRESENTING. Students:

- understand and interpret visual messages and media;
- analyze and critique media; and
- produce visual images, messages, and meanings that communicate effectively.

**NOTE:** Students of limited English proficiency (LEP) enrolled in Spanish Language Arts and/or in English as a Second Language will be expected to learn these same knowledge and skills for this grade level; however, students in Spanish Language Arts will learn these skills through their native language, and students in English as a Second Language will apply these skills at their proficiency level in English.

## SOCIAL STUDIES

In fourth grade social studies, your child will learn:

### HISTORY. Students:

- compare similarities and differences of Native American groups in Texas and the Western Hemisphere before European exploration;
- explain causes and effects of European exploration and colonization of Texas and the Western Hemisphere;
- explain causes and effects of the Texas Revolution, the Republic of Texas, and the annexation of Texas to the United States;
- describe political, economic, and social changes in Texas during the last half of the 19th century; and
- describe important issues, events, and individuals of the 20th century in Texas.

### GEOGRAPHY. Students:

- use geographic tools to collect, analyze, and interpret data;
- describe political, economic, and physical regions in Texas and the Western Hemisphere;
- explain the location and patterns of settlement and the geographic factors that influence where people live in Texas; and
- describe how people in Texas adapt to and modify their environment.

### ECONOMICS. Students:

- explain basic patterns of work and economic activities of early societies in Texas;
- describe the characteristics and benefits of the free enterprise system in Texas; and
- identify how Texas, the United States, and the world are economically interdependent.

### GOVERNMENT. Students:

- compare how people organized governments in different ways during the early development of Texas;
- identify important ideas in historic documents, such as the Texas Declaration of Independence; and
- explain the basic functions of the three branches of state government.

### CITIZENSHIP. Students:

- explain important customs, symbols, and celebrations of Texas;
- explain the role of the individual in state and local elections; and
- identify leaders in state and local government and tell how to contact them.

### CULTURE. Students:

- identify the contributions of people of various racial, ethnic, and religious groups to Texas.

### SCIENCE, TECHNOLOGY, AND SOCIETY. Students:

- describe the impact of science and technology on life in Texas.

### SOCIAL STUDIES SKILLS. Students:

- apply critical-thinking skills, communicate effectively, and use problem-solving and decision-making processes.

## MATHEMATICS

In third grade mathematics, your child will learn:

### NUMBER, OPERATION, AND QUANTITATIVE REASONING. Students:

- use place value to read, write, and describe numbers;
- compare and order whole numbers less than 10,000;
- determine value of a collection of coins and bills;
- construct fractional models and compare fractions;
- name fractional parts of a whole or set using symbols;
- construct models of equivalent fractions;
- model addition and subtraction;
- add and subtract with numbers less than 1,000;
- learn and apply multiplication facts;
- multiply using a one-digit multiplier;
- use models for division and record the solutions;
- round numbers to tens or hundreds; and
- estimate sums and differences.

### PATTERNS, RELATIONSHIPS, AND ALGEBRAIC THINKING. Students:

- make predictions and solve problems using patterns;
- identify patterns in multiplication facts;
- identify fact families for multiplication and division;
- generate tables of ordered pairs; and
- identify and extend patterns of ordered pairs.

### GEOMETRY AND SPATIAL REASONING. Students:

- name, describe, and compare shapes and solids;
- identify congruent shapes;
- create and identify lines of symmetry; and
- locate and name whole numbers and fractions on a number line.

### MEASUREMENT. Students:

- estimate and measure length using metric and customary units;
- find the perimeter of a figure;
- determine area using concrete models;
- tell and write time on digital and traditional clocks; and
- measure length, area, temperature, and time to solve problems.

### PROBABILITY AND STATISTICS. Students:

- collect, organize, record, and display data in picture and bar graphs;
- interpret information from graphs; and
- describe events as more likely, less likely or equally likely.

### PROBLEM SOLVING. Students:

- identify the mathematics in everyday situations;
- use a problem-solving model;
- use tools, such as real objects, manipulatives, and technology to solve problems;
- explain and record observations;
- relate informal language to mathematical language and symbols;
- make generalizations from patterns; and
- justify why an answer is reasonable and explain the solution process.

## SCIENCE

In third grade science, your child will learn:

### SCIENTIFIC INVESTIGATIONS IN THE FIELD AND LABORATORY. Students:

- conduct safe, environmentally appropriate, and ethical investigations; and
- make wise choices in use, conservation, disposal or recycling of materials.

### SCIENTIFIC INQUIRY AND CRITICAL THINKING. Students:

- formulate testable hypotheses and construct reasonable explanations from evidence;
- construct simple graphs, tables, maps, models, and charts to organize information;
- analyze scientific explanations as to their strengths and weaknesses, using scientific evidence;
- evaluate the impact of research on scientific thought, society, and the environment; and
- study the history of science and contributions of scientists.

### TOOLS AND MODELS. Students

- use tools, including calculators, safety goggles, microscopes, sound recorders, clocks, computers, hand lenses, thermometers, meter sticks, magnets, balances, and compasses; and
- demonstrate that repeated investigations may increase reliability.

### SYSTEMS. Students:

- observe a simple system and describe the role of various parts.

### FORCES CAUSE CHANGE. Students:

- measure changes in an object's position when a force is applied; and
- know Earth's surface can be changed by forces.

### PHYSICAL PROPERTIES. Students:

- gather data about temperature, magnetism, and hardness; and
- identify matter as liquids, solids, and gases.

### NEEDS OF LIVING ORGANISMS. Students:

- know that organisms need food, water, light, air, and habitat;
- observe organisms with similar needs that compete for resources;
- describe environmental changes; and
- describe how organisms modify their environment.

### ADAPTATIONS. Students:

- analyze how adaptive characteristics help individuals survive.

### INHERITED TRAITS AND LEARNED CHARACTERISTICS. Students:

- identify some inherited traits of plants and animals.

### PROCESSES OF THE NATURAL WORLD. Students:

- classify earth materials in local area as renewable, nonrenewable or inexhaustible;
- identify properties of soils, such as color and texture; and
- identify the position of planets in relation to the Sun.

## ENGLISH LANGUAGE ARTS & READING

In third grade language arts, your child will learn:

### LISTENING/SPEAKING. Students:

- listen to solve problems, gather information or appreciate stories;
- listen to identify the musical elements of literary language, such as rhymes, repeated sounds or instances of onomatopoeia;
- gain increasing control of grammar, such as subject-verb agreement, complete sentences, and correct tense usage; and
- compare language and oral traditions (family stories) that reflect customs, regions, and cultures.

### READING. Students:

- use knowledge of decoding and structural cues such as prefixes, suffixes, and derivational endings to identify words;
- read and comprehend a variety of third-grade level texts;
- read for enjoyment, to solve problems, to gather information, and to extend vocabulary;
- make and explain important inferences in a story;
- demonstrate knowledge of synonyms, antonyms, and multi-meaning words;
- gather important information using resources and references;
- analyze the literary elements of narrative text;
- read orally from familiar texts with accuracy, expression, appropriate phrasing, and attention to punctuation; and
- read silently for increasing periods of time.

### WRITING. Students:

- write to record ideas and reflections for a variety of audiences;
- use increasingly complex capitalization, punctuation, and spelling;
- develop, revise, and edit writing and compositions using established criteria;
- write for varied purposes, including to achieve a sense of audience, make precise word choices, and create vivid images;
- use available technology for word processing, spell checking, and printing; and
- compile notes into reports, outlines, and summaries.

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## SOCIAL STUDIES

In third grade social studies, your child will learn:

### HISTORY. Students:

- identify reasons people formed communities and describe how individuals, events, and ideas have shaped communities over time;
- compare ways people in communities meet their needs, in the past and present; and
- create and interpret timelines and describe historical times in terms of years, decades, and centuries.

### GEOGRAPHY. Students:

- compare how people in different communities adapt to or modify variations in the physical environment; and
- use cardinal and intermediate directions, scale, compass rose, grid, and symbols to locate places and interpret maps and globes.

### ECONOMICS. Students:

- identify ways of earning, spending, and saving money;
- define scarcity and give examples of its impact on goods and services and on interdependence within and among communities; and
- explain how supply and demand affects price and how cost of production and selling price affect profits.

### GOVERNMENT. Students:

- describe the basic structure of local government, identify local government officials, and explain how they are chosen; and
- identify services commonly provided by local governments and explain how they are financed.

### CITIZENSHIP. Students:

- identify characteristics of good citizenship and identify people who exemplify good citizenship;
- explain the importance of civic participation and identify examples of actions people can take to improve the community; and
- identify examples of organizations that serve the common good.

### CULTURE. Students:

- explain the significance of ethnic and/or cultural celebrations in the state, nation, and world;
- retell the heroic deeds of real and fictional heroes who have helped to shape the culture of communities; and
- identify selected writers and artists whose works exemplify the cultural heritage of communities around the world.

### SCIENCE, TECHNOLOGY, AND SOCIETY. Students:

- identify scientists and inventors who have created new technology; and
- explain the impact of new technology on communities around the world.

### SOCIAL STUDIES SKILLS. Students:

- apply critical-thinking skills, communicate effectively, and use problem-solving and decision-making processes.

## MATHEMATICS

In second grade mathematics, your child will learn:

### NUMBER, OPERATION, AND QUANTITATIVE REASONING. Students:

- use number models to represent, compare, and order whole numbers;
- read numbers less than 1,000;
- name fractional parts of a whole or set of objects;
- recall and apply basic addition facts;
- add and subtract with two-digit numbers;
- determine the value of a collection of coins; and
- model multiplication and division.

### PATTERNS, RELATIONSHIPS, AND ALGEBRAIC THINKING. Students:

- find patterns in the 100s chart;
- use place value to compare and order numbers;
- use patterns to remember addition facts;
- solve subtraction problems using fact families;
- generate ordered pairs from a real-life situation;
- identify and extend a list of ordered pairs; and
- solve problems using patterns.

### GEOMETRY AND SPATIAL REASONING. Students:

- identify attributes of shapes and solids;
- compare shapes and solids using attributes;
- cut geometric shapes apart and identify the new shapes made; and
- locate and name whole numbers on a number line.

### MEASUREMENT. Students:

- identify models for standard units of length, capacity, and weight;
- measure using standard units;
- describe length of an activity;
- read a thermometer to gather data; and
- describe time on a clock (hours, minutes).

### PROBABILITY AND STATISTICS. Students:

- construct picture and bar graphs;
- draw conclusions and answer questions from graphs; and
- describe an event as more likely or less likely.

### PROBLEM SOLVING. Students:

- identify the mathematics in everyday situations;
- use a problem-solving model;
- select or develop an appropriate problem-solving strategy;
- use tools such as real objects, manipulatives, and technology to solve problems;
- relate informal language to mathematical language and symbols; and
- reason and support their thinking using objects, words, pictures, numbers, and technology.

## SCIENCE

In second grade science, your child will learn:

### SCIENTIFIC INVESTIGATIONS. Students:

- conduct classroom and field investigations using safe practices; and
- learn how to use and conserve resources.

### SCIENTIFIC INQUIRY AND CRITICAL THINKING. Students:

- ask questions about organisms, objects, and events;
- plan and conduct simple descriptive investigations;
- compare results of investigations with what students know about the world; and
- explain a problem and identify a task and solution related to the problem.

### TOOLS AND MODELS. Students:

- collect information using tools including rulers, meter sticks, measuring cups, clocks, hand lenses, computers, thermometers, and balances; and
- measure and compare organisms and objects.

### PROPERTIES AND PATTERNS. Students:

- classify organisms, objects, and events based on properties and patterns; and
- identify, predict, replicate, and create patterns.

### SYSTEMS. Students:

- know that systems have parts and are composed of organisms and objects; and
- identify parts that, when put together, can do things they cannot do by themselves.

### CHANGE. Students:

- observe, measure, and analyze changes, including weather, the night sky, and seasons; and
- identify, predict, and test uses of heat to cause change.

### LIVING ORGANISMS AND NON-LIVING OBJECTS. Students:

- identify characteristics of living organisms and non-living objects.

### BASIC NEEDS OF ORGANISMS. Students:

- identify external characteristics of plants and animals that allow their needs to be met; and
- compare the ways organisms depend on each other and on their environments.

### PROCESSES OF THE NATURAL WORLD. Students:

- describe the water cycle; and
- identify uses of natural resources.

## ENGLISH LANGUAGE ARTS & READING

In second grade language arts, your child will learn:

### LISTENING/SPEAKING. Students:

- listen responsively to stories and other texts read aloud;
- choose and adapt spoken language according to the audience, purpose, and occasion;
- identify rhymes, repeated sounds or instances of onomatopoeia;
- compare stories and other literature that reflect different regions, customs, and cultures;
- ask and answer relevant questions;
- make contributions to small or large group discussions; and
- gain increasing control of grammar, such as subject-verb agreement, complete sentences and correct tense usage.

### READING. Students:

- decode using all letter-sound correspondences;
- use knowledge of syntax (word order) and semantics (word meaning) to identify unfamiliar words;
- read and comprehend a variety of second-grade level texts silently;
- learn new vocabulary words through wide reading;
- make and explain important inferences in a story;
- gather important information using resources and references; and
- read silently for increasing periods of time.

### WRITING. Students:

- write to record ideas and reflections for a variety of audiences;
- use more complex capitalization, punctuation, and spelling;
- compose complete sentences in written texts and use appropriate end punctuation;
- engage in the writing process by generating ideas and developing and polishing final copies of compositions;
- identify the most effective features of a piece of writing using criteria generated by the teacher and class; and
- take simple notes from relevant sources, such as classroom guests, information books, and media sources.

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## SOCIAL STUDIES

In second grade social studies, your child will learn:

### HISTORY. Students:

- explain the significance of celebrations, such as Independence Day, and landmarks, such as state and national capitol buildings;
- describe and measure calendar time;
- create and interpret timelines;
- name several sources of information about a given event;
- compare various interpretations of the same time period; and
- identify contributions of people, such as Henrietta King and Robert Fulton.

### GEOGRAPHY. Students:

- use symbols, find locations, and determine directions on maps and globes;
- draw maps to show places and routes;
- identify major landforms and bodies of water on maps and globes;
- compare information from different sources about places and regions;
- identify relationships between people and their physical environment; and
- identify ways people can conserve and replenish natural resources.

### ECONOMICS. Students:

- explain how work provides income;
- explain choices people have in a free enterprise system; and
- identify roles of producers and consumers.

### GOVERNMENT. Students:

- identify functions of government;
- identify governmental services in the community; and
- compare roles of public officials and identify ways they are selected.

### CITIZENSHIP. Students:

- identify characteristics of good citizenship and identify historic figures and ordinary people who exemplify good citizenship; and
- identify patriotic songs and symbols.

### CULTURE. Students:

- identify stories, statues, and other examples of local cultural heritage.

### SCIENCE, TECHNOLOGY, AND SOCIETY. Students:

- describe how science and technology have changed ways people meet basic needs and have changed communication, transportation, and recreation.

### SOCIAL STUDIES SKILLS. Students:

- obtain information from a variety of sources;
- use tables of contents and glossaries to locate information;
- sequence and categorize information;
- identify main ideas, make predictions, and compare and contrast;
- express ideas orally and create written and visual material; and
- use problem-solving and decision-making processes.

## MATHEMATICS

In first grade mathematics, your child will learn:

### NUMBER, OPERATION, AND QUANTITATIVE REASONING. Students:

- compare and order whole numbers up to 99;
- create sets of tens and ones using concrete objects;
- describe values of coins and their relationships;
- read and write numbers to 99;
- separate a whole into parts and describe the parts of a set;
- describe the parts of a set of objects;
- model and write addition and subtraction sentences; and
- learn and apply addition facts.

### PATTERNS, RELATIONSHIPS, AND ALGEBRAIC THINKING. Students:

- find patterns such as odd and even;
- use place value to compare and order whole numbers;
- identify fact families for addition and subtraction;
- identify, describe, and extend patterns to solve problems; and
- skip count by twos, fives, and tens.

### GEOMETRY AND SPATIAL REASONING. Students:

- sort objects by attributes using informal language;
- identify shapes and solids; and
- combine shapes to make a new shape.

### MEASUREMENT. Students:

- estimate and measure using nonstandard units;
- relate the unit to size of object;
- recognize reasonable temperatures;
- describe time on a clock (hours, half hours); and
- order events by length of time.

### PROBABILITY AND STATISTICS. Students:

- collect and sort data;
- construct graphs (real, picture, and bar);
- draw conclusions from graphs; and
- identify events as certain or impossible.

### PROBLEM SOLVING. Students:

- identify mathematics in everyday situations;
- use a problem-solving model, with guidance as needed;
- select or develop an appropriate problem-solving strategy;
- use tools to solve problems;
- explain and record observations using objects, words, pictures, numbers, and technology;
- relate informal language to mathematical language and symbols; and
- reason and support their thinking using objects, words, pictures, numbers, and technology.

## SCIENCE

In first grade science, your child will learn:

### SCIENTIFIC INVESTIGATIONS. Students:

- demonstrate safe practices during classroom and field investigations; and
- learn how to use and conserve resources.

### SCIENTIFIC INQUIRY AND CRITICAL THINKING. Students:

- ask questions about organisms, objects, and events;
- construct reasonable explanations using information;
- explain a problem in their own words and propose a solution; and
- use tools, including hand lenses, clocks, computers, thermometers, and balances.

### PROPERTIES, PATTERNS, AND SYSTEMS. Students:

- identify, predict, and create patterns, including those in charts, graphs, and numbers;
- know that systems have parts and are composed of organisms and objects;
- observe and describe the parts of plants and animals; and
- manipulate objects so that the parts are separated from the whole, which may result in the part or the whole not working.

### CHANGE. Students:

- measure changes in size, mass, color, position, quantity, sound, and movement;
- observe and record weather changes from day to day and over seasons; and
- observe stages in the life cycle of organisms in their natural environment.

### LIVING ORGANISMS AND NON-LIVING OBJECTS. Students:

- group and compare living organisms and non-living objects.

### BASIC NEEDS OF ORGANISMS. Students:

- identify characteristics of organisms that allow their basic needs to be met; and
- compare the ways living organisms depend on each other.

### PROCESSES OF THE NATURAL WORLD. Students:

- describe natural sources of water, including streams, lakes, and oceans;
- observe and describe differences in rocks and soil samples; and
- identify how rocks, soil, and water are used and how they can be recycled.

## ENGLISH LANGUAGE ARTS & READING

In first grade language arts, your child will learn:

### LISTENING/SPEAKING. Students:

- listen to gather information, solve problems, and enjoy and appreciate literature;
- present dramatic interpretations of experiences, stories, poems, and plays;
- participate in group discussions; and
- make announcements, give directions, and make introductions appropriately.

### READING. Students:

- recognize the conventions of print (e.g., understand that print moves left to right, involves upper and lower case letters, and represents spoken language);
- manipulate sounds in spoken words (phonemic awareness) and understand that letters represent sounds (phonics);
- read and comprehend first-grade level text fluently;
- use graphs, charts, signs, and captions to acquire information;
- find and connect ideas and themes in different books and other printed resources;
- draw conclusions from information gathered; and
- self-select books and stories by drawing on personal interest, relying on knowledge of authors or types of texts.

### WRITING. Students:

- write their own name and each letter of the alphabet;
- gain increasing control of penmanship and punctuation;
- compose questions, ideas, and stories;
- write for different purposes, such as composing lists, letters, stories, and poems;
- engage in the writing process by generating ideas before writing and developing and polishing drafts; and
- record or dictate questions for investigations.

**NOTE:** Students of limited English proficiency (LEP) enrolled in Spanish Language Arts and/or in English as a Second Language will be expected to learn these same knowledge and skills for this grade level; however, students in Spanish Language Arts will learn these skills through their native language, and students in English as a Second Language will apply these skills at their proficiency level in English.

## SOCIAL STUDIES

In first grade social studies, your child will learn:

### HISTORY. Students:

- identify contributions of people, such as Sam Houston and Thomas Edison;
- describe the origins of holidays, such as Veterans Day;
- identify anthems and mottos of the state and nation; and
- distinguish among past, present, and future.

### GEOGRAPHY. Students:

- locate places using cardinal directions;
- create and use simple maps;
- locate community, state, and nation on maps and globes;
- describe physical and human characteristics of places; and
- identify natural resources and how they are used.

### ECONOMICS. Students:

- identify examples of goods and services, ways people exchange them, and the role of markets in the exchange;
- identify reasons for making economic choices; and
- describe how specialized jobs contribute to production of goods and services.

### GOVERNMENT. Students:

- explain the need for and give examples of rules and laws; and
- identify and describe the roles of leaders in the community, state, and nation.

### CITIZENSHIP. Students:

- identify characteristics of good citizenship and identify historic figures and ordinary people who exemplify good citizenship;
- explain patriotic symbols, such as the Liberty Bell, and
- recite and explain the Pledge of Allegiance and Pledge to the Texas Flag.

### CULTURE. Students:

- describe ways that families meet basic human needs; and
- retell stories from folktales and legends.

### SCIENCE, TECHNOLOGY, AND SOCIETY. Students:

- describe how technology has changed how families live and how people work.

### SOCIAL STUDIES SKILLS. Students:

- sequence and categorize information;
- identify main ideas;
- express ideas orally and visually; and
- use problem-solving and decision-making processes.

## MATHEMATICS

In Kindergarten mathematics, your child will learn:

### NUMBER, OPERATION, AND QUANTITATIVE REASONING. Students:

- use words and numbers to describe relative sizes of objects;
- describe position in a sequence of events;
- name ordinal positions (first, second, etc.);
- separate a whole into equal parts;
- explain half of a whole; and
- model addition and subtraction.

### PATTERNS, RELATIONSHIPS, AND ALGEBRAIC THINKING. Students:

- identify, extend, and create patterns;
- use patterns to predict what comes next; and
- count to 100 by ones.

### GEOMETRY AND SPATIAL REASONING. Students:

- describe one object in relation to another using informal language;
- place objects in a given position;
- describe and identify objects;
- compare and sort objects;
- describe and compare solids;
- recognize shapes; and
- describe, identify, and compare shapes.

### MEASUREMENT. Students:

- compare and order objects by length, capacity, or weight;
- identify objects greater than, less than or equal to a given object;
- compare temperatures;
- compare times;
- sequence events; and
- read a calendar using days, weeks, and months.

### PROBABILITY AND STATISTICS. Students:

- construct real and picture graphs; and
- use graphs to answer questions.

### PROBLEM SOLVING. Students:

- identify mathematics in everyday situations;
- use a problem-solving model with guidance; and
- select or develop an appropriate problem-solving strategy.

## SCIENCE

In Kindergarten science, your child will learn:

### SAFETY. Students:

- demonstrate safe science practices in the classroom and field; and
- use and conserve resources.

### SCIENTIFIC INQUIRY AND CRITICAL THINKING. Students:

- use their senses and common tools such as hand lenses, balances, cups, and bowls to make observations and collect information by asking questions, gathering information, communicating findings, and making informed decisions; and
- use computers and information technology tools to support their investigations.

### PATTERNS, SYSTEMS, AND CYCLES. Students:

- describe patterns including seasons, growth, day and night, and predict what happens next, using charts and graphs;
- learn how systems have basic properties that can be described in terms of parts, such as those in toys, vehicles, and construction sets; and
- understand structures, interactions, and processes found in systems that, when put together, can do things they cannot do by themselves.

### CHANGE. Students:

- observe, describe, and record changes in systems, cycles, and models; and
- record changes in size, mass, color, position, quantity, time, temperature, sound, and movement by observing weather changes and life cycles of organisms in their natural environment.

### LIVING ORGANISMS AND NON-LIVING OBJECTS. Students:

- identify organisms and objects and their parts;
- explore the basic needs of living organisms and give examples of their dependence on each other; and
- identify how the Earth provides resources for life.

### UNDERSTANDING THE NATURAL WORLD. Students:

- observe and describe properties of rocks, soil, and water.

## ENGLISH LANGUAGE ARTS & READING

In Kindergarten language arts, your child will learn:

### LISTENING/SPEAKING. Students:

- listen to information, rhymes, songs, conversations, and stories;
- listen and talk about experiences, customs, and cultures;
- make announcements, give directions, and make introductions;
- act out plays, poems, and stories;
- clearly request, retell, and/or describe stories and experiences; and
- listen responsively to contemporary and classic stories and other texts read aloud.

### READING. Students:

- recognize that print represents spoken language and conveys meaning, such as their own name, and signs such as Exit and Danger;
- recognize upper and lower case letters in print and understand that print represents language;
- manipulate sounds in spoken words (phonemic awareness);
- decode simple words using letter-sound knowledge;
- identify words that name persons, places or things, and words that name actions;
- learn new vocabulary words through selections read aloud;
- retell or act out important events in a story; and
- gather important information and ask relevant questions.

### WRITING. Students:

- write their own name and each letter of the alphabet;
- write messages using their knowledge of letters and sounds;
- record or dictate questions, ideas, stories; and
- write labels, notes, and captions for illustrations, possessions, charts, and centers.

**NOTE:** Students of limited English proficiency (LEP) enrolled in Spanish Language Arts and/or in English as a Second Language will be expected to learn these same knowledge and skills for this grade level; however, students in Spanish Language Arts will learn these skills through their native language, and students in English as a second language will apply these skills at their proficiency level in English.

## SOCIAL STUDIES

In Kindergarten social studies, your child will learn:

### HISTORY. Students:

- learn about patriotic holidays;
- identify contributions of people, such as George Washington; and
- place events in chronological order.

### GEOGRAPHY. Students:

- locate and describe the relative location of places; and
- identify physical and human characteristics of places.

### ECONOMICS. Students:

- identify basic human needs and explain how they can be met; and
- identify jobs and why people have them.

### GOVERNMENT. Students:

- identify rules and reasons for having them; and
- identify authority figures.

### CITIZENSHIP. Students:

- identify U.S. and Texas flags; and
- recite the Pledge of Allegiance.

### CULTURE. Students:

- identify similarities and differences among people; and
- identify family and community customs.

### SCIENCE, TECHNOLOGY, AND SOCIETY. Students:

- identify examples of technology and describe how they meet people's needs.

### SOCIAL STUDIES SKILLS. Students:

- obtain information from a variety of oral and visual sources;
- sequence and categorize information;
- identify main ideas;
- express ideas orally and visually; and
- use problem-solving and decision-making processes.

## Why are there learning standards for our children?

Every day our world becomes more complex and demanding. To succeed beyond high school, students must be better prepared than at any time in the history of our state. Consequently, expectations for our students and our schools are higher than they have ever been.

To meet these expectations, the State Board of Education has adopted a curriculum framework for Texas schools — the Texas Essential Knowledge and Skills (TEKS). These learning standards will help ensure that all students are prepared to meet the challenges ahead of them as they move into the next century.

- Each student must become a more effective reader.
- Each student must know and apply more complex mathematics.
- Each student must develop a stronger understanding of science concepts, especially in biology, chemistry, and physics.
- Each student must master the social studies skills and content necessary to be a responsible adult citizen.
- Each student must master a wider range of technological skills.
- Each student must master skills in fine arts, including art, music, and theatre.
- Each student must master skills in languages other than English, health education, and physical education.

The Texas Essential Knowledge and Skills identify what Texas students should know and be able to do at every grade and in every course in the required curriculum as they move successfully through our public schools.

The enclosed information summarizes the TEKS at your child's grade level in the four foundation areas of English language arts and reading, mathematics, science, and social studies.

If you would like to see all of the TEKS that your child will learn, ask a teacher or principal to show you a copy, or order a copy from the Texas Education Agency, or review them online at <http://www.tea.state.tx.us/teks/index.html>.

We are proud of education in Texas and hope that you will be proud of what your child will learn and do in school this year.

Shirley Nealey, Ed.D.

Commissioner of Education

## The Texas Education Agency (TEA) offers the following resources.

**TAKS.** Students in grades 3 through 11 (exit level) take the Texas Assessment of Knowledge and Skills (TAKS). These tests indicate how much your child has learned and help to indicate how well your district's instructional program is functioning. Students receiving special education services may take the State Developed Alternative Assessment II (SDAA II); testing decisions for these students are made by each student's admission, review, and dismissal (ARD) committee.

The TAKS and SDAA II tests are released to the public according to guidelines established by state law and State Board of Education rules. Released TAKS and SDAA II tests administered in the 2002-03 and the 2003-04 school years are currently available on the TEA website at: [www.tea.state.tx.us/student\\_assessment/resources/colgate/index.html](http://www.tea.state.tx.us/student_assessment/resources/colgate/index.html). Legislative changes may impact the released test schedule; check the website periodically for updates.

**Understanding the Confidentiality Student Report.** Every child who takes the TAKS test gets a report of his or her score. This report is called the Confidential Student Report, or CSR. By carefully examining your child's CSR, you will find out where your child is doing well and where your child may need to improve. The purpose of the parent brochure is to explain a sample test report so that you can understand your child's actual test report. Parent brochures are available on our website at [www.tea.state.tx.us/student\\_assessment/resources/guides/parent\\_csr/index.html](http://www.tea.state.tx.us/student_assessment/resources/guides/parent_csr/index.html).

**Study Guides for TAKS.** TEA has developed TAKS Study Guides to help students strengthen the TEKS-based skills that are taught in class and tested on TAKS. The guides are designed for students to use on their own or to work through with family members. Concepts are presented in a variety of ways to help students review the information and skills they need to be successful on the TAKS.

The study guides are sent to each campus in late spring for students who did not successfully meet the passing standard. Another way to access the study guides is to download them from the TEA website at the following address: [www.tea.state.tx.us/student\\_assessment/resources/guides/study/index.html](http://www.tea.state.tx.us/student_assessment/resources/guides/study/index.html).

The TAKS Study Guides may also be purchased by calling Pearson Educational Measurement at 1-800-252-9186.

**INFORMATION ON THE INTERNET.** If you have access to the Internet, the TEA website provides information, data, and resources about the Texas Essential Knowledge and Skills (TEKS), testing, accountability, school finance, state law, and many other areas. The TEA website is [www.tea.state.tx.us](http://www.tea.state.tx.us). To see and print the TEKS, go to [www.tea.state.tx.us/teks/index.html](http://www.tea.state.tx.us/teks/index.html).

**FOR MORE INFORMATION.** If you have additional questions about Texas public schools, feel free to contact the Texas Education Agency, 1701 North Congress Avenue, Austin, TX 78701-1494 or call (512)163-9734.

## ENGLISH LANGUAGE ARTS & READING

In fifth grade language arts, your child will learn:

### LISTENING/SPEAKING. Students:

- analyze a speaker's message for content, persuasive technique, and tone;
- distinguish between a speaker's opinion and verifiable fact;
- listen to proficient models of oral reading of classic and contemporary works; and
- identify how language, such as labels and sayings, reflects regions and cultures.

### READING. Students:

- read and comprehend a variety of fifth-grade level texts;
- draw inferences from text and support these conclusions and generalizations with evidence from the text;
- offer observations, make connections, react, speculate, interpret, and raise questions in response to text;
- generate relevant research using multiple sources of information;
- demonstrate characteristics of fluent and effective reading;
- use a thesaurus, synonym finder, dictionary, and software to clarify meanings and usage; and
- support responses to readings by referring to relevant aspects of the text and their own experiences.

### WRITING. Students:

- compose original texts applying the conventions of capitalization, punctuation, grammar, and correct spelling;
- compose, organize, and revise letters, essays, records, and research papers;
- use suspense, dialogue, and figurative language in original compositions;
- write to persuade, argue, and request; and
- engage in the writing process and refine selected drafts to publish for general and specific audiences.

### VIEWING/REPRESENTING. Students:

- describe, interpret, and use visual media to compare ideas and points of view;
- analyze, critique, and contrast the messages found in visual media; and
- produce class newspapers, multimedia reports, and/or short films.

**NOTE:** Students of limited English proficiency (LEP) enrolled in Spanish Language Arts and/or in English as a Second Language will be expected to learn these same knowledge and skills for this grade level; however, students in Spanish Language Arts will learn these skills through their native language, and students in English as a Second Language will apply these skills at their proficiency level in English.

## SOCIAL STUDIES

In fifth grade social studies, your child will learn:

### HISTORY. Students:

- explain causes and effects of European colonization;
- summarize how conflict between the American colonies and Great Britain led to American independence;
- describe events that led to the creation of the U.S. Constitution;
- identify important social changes of the 19th century, including the Industrial Revolution, westward expansion, and the Civil War; and
- describe important issues, events, and individuals of the 20th century.

### GEOGRAPHY. Students:

- use geographic tools to collect, analyze, and interpret data;
- describe political, economic, and physical regions in the United States;
- explain the location and patterns of settlement and the geographic factors that influence where people live in the United States; and
- describe how people in the United States adapt to and modify their environment.

### ECONOMICS. Students:

- explain basic economic patterns of early societies in the United States;
- identify economic motivations for exploration and colonization;
- describe the characteristics and benefits of the free enterprise system in the United States; and
- explain patterns of work and economic activities in Texas.

### GOVERNMENT. Students:

- identify examples of representative government in the American colonies;
- identify important ideas in the Declaration of Independence and the U.S. Constitution; and
- describe the framework of government created by the U.S. Constitution.

### CITIZENSHIP. Students:

- explain important customs, symbols, and celebrations that represent American beliefs;
- explain the importance of individual participation in the democratic process;
- identify leaders of the national government; and
- summarize fundamental rights of American citizens.

### CULTURE. Students:

- explain the relationship between the arts and the times during which they were created; and
- identify the contributions of people of various racial, ethnic, and religious groups to the United States.

### SCIENCE, TECHNOLOGY, AND SOCIETY. Students:

- describe the impact of science and technology on life in the United States.

### SOCIAL STUDIES SKILLS. Students:

- apply critical-thinking skills, communicate effectively, and use problem-solving and decision-making processes.