

- Understand the importance of writers and artists to cultural heritage.
- Use vocabulary related to time, including ancient and modern times, and past, present, and future times.
- Identify individuals who have created or invented new technology that changed life in communities, past and present.
- Locate information in the textbook and other resource materials.
- Understand and use information from a variety of sources by identifying the main idea, identifying cause-and-effect relationships, sequencing and categorizing information, and comparing/contrasting.
- Interpret and create graphs, charts, tables, timelines, and maps.
- Demonstrate effective oral and written communication skills.
- Demonstrate both individual and cooperative problem-solving and decision-making skills.

Outside of School:

As parents, you can provide opportunities for your 3rd grader to

- See various places of interest in the Houston area.
- Create maps to show locations.
- Practice locating the states of the United States on a map.
- Use a variety of sources to locate, discuss, and summarize current events.

Grade 4

Reading/Language Arts

Prerequisites:

Before entering 4th grade, students should be able to

- Pay attention and use good manners when responding to multiple-step oral directions, questions, speakers, and presentations.
- Use correct grammar when speaking.
- Read third-grade-level material silently for at least 30 minutes daily, at 110 words per minute.

- Show understanding of third-grade-level reading materials.
- Use proper cursive letter formation and spacing.
- Write paragraphs that are grammatically correct, well-developed and correctly structured.
- Write comparison/contrast papers, stories, instructions, research papers, letters, and poems, and check to see that the writing purpose has been met.
- Spell third-grade-level words accurately in all written assignments.
- Apply capitalization rules (friendly letters, titles, proper nouns).
- Apply punctuation rules (commas in a series, apostrophes in singular possessives, and quotation marks for titles).

Competencies:

During 4th grade, students will

- Listen with respect and respond to complex oral directions and a variety of presentations.
- Use correct voice tone, eye contact, and standard English in classroom discussions, reports, and presentations.
- Read new multi-syllable words in fourth grade material by using phonics, word parts, and context clues.
- Establish their own purposes for reading, read silently for at least 40 minutes, adjust the reading rate to suit the need, self-correct as necessary, and maintain a rate of 130 words per minute in familiar material.
- Learn new words through word study, context clues, dictionaries, and thesauruses.
- Find implied main idea by noting details and summarizing text.
- Check understanding of grade-level materials and make needed changes by rereading, searching for clues, using reference aids, and asking questions.
- Read realistic fiction, fantasies, mysteries, biographies, nonfiction, poetry, and classic literature, including books with chapters and books from a variety of cultures.
- Use multiple sources, such as dictionaries, encyclopedias, electronic texts, parts of a book, and library tools for researching answers to questions.

- Write legibly (both cursive and printing) for varying purposes.
- Use proper capitalization and punctuation (dialogue and titles).
- Apply spelling rules and patterns with increasing accuracy in all writing.
- Write compositions which contain well-constructed, well-developed paragraphs that include a topic sentence and supporting details, and feature varying sentence types and correct English usage.
- Write creative stories, personal stories, poetry, editorials, and informative reports.
- Write compositions using all stages of the writing process: prewriting, drafting, revising, proofreading, and editing.
- Improve accuracy in keyboarding skills to use computers as a tool in the writing process.
- Judge how different media formats influence and inform (examples: television, radio, magazines).
- Produce visual-aid materials to support various reports and oral presentations.

Outside of School:

As parents, you can provide opportunities for your 4th grader to

- See you use good listening and speaking skills.
- Listen to you read.
- Go to the library with you.
- Talk about and read about current events.
- Write friendly letters and thank-you notes.
- Keep a journal on a family trip.

Mathematics

Prerequisites:

Before entering 4th grade, students should be able to

- Understand and use third-grade mathematics vocabulary.
- Follow a 4-step problem-solving plan (such as Big Q, window pane, or list) that uses multiple strategies to solve application-level word problems and requires students to explain and justify their thinking.

Numbers and Operations

- Read, write, and identify place values for numbers through 999,999.
- Compare and order numbers through 9,999.
- Round two and three-digit numbers.
- Use objects to identify, construct, and compare fractional parts of whole objects or sets of objects (up to twelfths).
- Recall all addition facts through 18 with increasing speed.
- Solve addition and subtraction problems with three digits, with and without regrouping.
- Estimate sums and differences.
- Use objects to learn and apply multiplication facts through tens.
- Solve and write multiplication problems with one-digit multipliers.
- Use objects or pictures to solve division problems.
- Determine the value of a collection of coins and bills.

Patterns and Relationships

- Identify number patterns using addition and subtraction.
- Understand that multiplication and division are related by fact families.
- Identify and extend number and geometric patterns.
- Make and extend a table of paired numbers such as insects and legs.

Geometry

- Identify congruent shapes and lines of symmetry.
- Describe plane and solid figures, using formal geometric terms (vertices, edges, faces, etc.).
- Locate and name whole numbers and fractions on a number line.

Measurement

- Use a thermometer to measure temperature.
- Estimate and measure length using customary and metric units.
- Solve perimeter problems.
- Use grids to find the areas of shapes.
- Describe time on clocks.
- Understand the concept of volume.
- Know benchmarks for standard units of measure for capacity, length, and weight/mass.

Probability and Statistics

- Collect, organize, record, display, and interpret data in pictographs and bar graphs.
- Use data to describe events as less likely, more likely, or equally likely.

Competencies:***During 4th grade, students will***

- Understand and use fourth-grade mathematics vocabulary.
- Follow a 4-step problem-solving plan (such as Big Q, window pane, or list) that uses multiple strategies to solve application-level word problems and requires students to explain and justify their thinking.

Numbers and Operations

- Use place value to read, write, compare, and order whole numbers through the millions place.
- Use objects and pictures to read, write, compare, and order decimals through the hundredths place.
- Round numbers to nearest ten, hundred, or thousand.
- Use pictures to recognize and compare fractions.
- Practice addition and multiplication facts with increasing speed.
- Add and subtract whole numbers to solve increasingly complex problems.
- Use pictures to add and subtract decimals to the hundredths place.
- Multiply (three digits by two digits) and divide (three digits by one digit), using whole numbers, to solve increasingly complex problems.
- Estimate sums, differences, products, and quotients to solve problems.

Patterns and Relationships

- Recognize patterns in multiplication and division, and use these patterns to solve problems.
- Show that multiplication and division problems are related by fact families.
- Describe the relationship between two sets of related data, such as ordered pairs in a table (example: For the ordered pairs shown on this T-chart, the relationship is “multiply by four.”).

1	4
3	12
4	16

Geometry

- Identify and use formal language to describe right, acute, and obtuse angles; parallel and perpendicular lines; symmetry; and congruence.
- Locate and name points on a number line, using whole numbers, fractions, and decimals.
- Use pictures to show translations, reflections, and rotations of triangles (see glossary).

Measurement

- Perform simple conversions between different units involving length, capacity, and weight.
- Solve word problems using length, time, temperature, perimeter, and area.
- Use concrete models of standard cubic units to measure volume.

Probability and Statistics

- Collect, organize, display, and interpret sets of data using bar graphs, pictographs, and line graphs.
- Use concrete objects or pictures to make generalizations about determining all possible combinations of a given set of data or of objects in a problem situation.

Outside of School:***As parents, you can provide opportunities for your 4th grader to***

- Practice addition, subtraction, multiplication, and division facts using flashcards, games, calculators, or computer games.
- Practice problem-solving skills related to tasks such as cooking, shopping, and telling time.
- Spend time doing strategy-related problem-solving activities such as chess, puzzles, Monopoly, or cards.
- Use words to explain math problems.

Science***Prerequisites:******Before entering 4th grade, students should be able to***

- Identify properties of matter—solid, liquid, or gas.
- Collect and analyze information using tools such as rulers, meter sticks, measuring cups, hand lenses, computers, clocks, thermometers, and balances.

- Plan and implement investigations using a scientific process.
- Follow lab safety rules.
- Understand the interdependence of plants and animals and the characteristics and adaptations necessary for survival.
- Identify slow and rapid forces that can change the earth's surface.
- List and describe the planets of the solar system.
- Construct simple graphs, tables, maps, and charts to organize, examine, and evaluate information.
- Analyze and interpret information to construct explanations.
- Identify and describe the importance of natural resources such as rocks, soil, water, gases of the atmosphere, and heat energy.
- Observe simple systems, and describe the roles of their parts, such as ecosystems and simple and complex machines (scissors, yo-yo, gears).
- Recognize forces such as gravity, friction, and push or pull.

Competencies:

During 4th grade, students will

- Use a microscope, and identify its parts.
- Collect and analyze data using tools such as hand lenses, calculators, computers, microscopes, sound recorders, stopwatches, thermometers, and metric measurement tools.
- Plan, conduct, and analyze results in investigations.
- Use critical thinking and scientific problem-solving to make informed decisions (impact of research, accuracy of promotional materials describing products and services, critique of scientific explanations for strengths and weaknesses).
- Identify the parts of systems, such as ecosystems and simple and complex machines.
- Make wise choices in the use and conservation of resources, including soil, and in the disposal or recycling of materials.
- Identify weather tools and patterns.
- Investigate physical properties of matter, such as density, buoyancy, and magnetism.
- Investigate electrical energy.

- Determine the characteristics of plants and animals that affect their adaptations for survival.
- Recognize the ocean's effects on land.
- Visit the planetarium to learn about the sun, moon phases, constellations, planets, etc.

Outside of School:

As parents, you can provide opportunities for your 4th grader to

- Review science vocabulary.
- Review science notes and study guides.
- Read nonfiction books, magazines, and newspaper articles on science topics.
- Discuss natural cycles.
- Use measurement and measurement tools in real-life situations.
- Start a collection (rocks, shells, leaves, etc.).
- Participate in recycling, conservation of resources, and preservation.
- Practice safety rules at home.
- Discuss with you drug/alcohol abuse and resulting harmful effects on the human body.
- Watch educational programs such as *Bill Nye the Science Guy*.
- Share science journals, daily work, and homework with you.

Social Studies

Prerequisites:

Before entering 4th grade, students should be able to

- Locate the 50 states, the seven continents, and the four hemispheres on maps.
- Identify and use cardinal and intermediate directions, compass rose, grids, symbols, and legends with maps and globes.
- Create, color, and label maps accurately.
- Describe and explain climate, landforms, and natural resources.
- Identify reasons people have formed communities, including a need for security, law, and material well-being.
- Identify ways of earning, spending, and saving money.
- Explain the concept of a free market.
- Describe how a simple business operates within a free enterprise system.

- Identify the characteristics of good citizenship, including actions individuals can take to improve the community.
- Describe the basic structure and function of local government.
- Explain and compare the significance of cultural celebrations.
- Locate information in the textbook and other resource materials.
- Demonstrate effective oral and written communication skills.

Competencies:

During 4th grade, students will

- Compare the ways of life of Native American groups in Texas and the Western Hemisphere.
- Identify European explorers and the reasons for exploration in the settlement of Texas and the Western Hemisphere.
- Analyze causes and effects of the Texas Revolution.
- Describe and compare the regions of Texas and the regions of the United States.
- Identify the settlement patterns and the geographic factors (landforms, climate, vegetation) that influence where people have chosen to live, past and present.
- Use geographic tools (grids, compass rose, map legends, symbols, scale, latitude and longitude) to collect, analyze, and interpret data.
- Explain how people in different regions of Texas earn their living, past and present.
- Explain how Texas, the United States, and other parts of the world are economically interdependent.
- Explain how people organized governments in different ways in early Texas, and explain important ideas in historic documents of Texas.
- Explain how a democratic society works and the importance of effective leadership in that society.
- Identify customs, symbols, and celebrations of Texas.
- Continue to create, color, and label maps accurately.
- Describe major political, economic, and social changes in Texas during the 19th and 20th centuries.

- Understand the reasons for exploration and colonization and the basic economic patterns of early societies in Texas.
- Understand the characteristics and benefits of the free enterprise system in Texas.
- Understand important ideas in historic documents of Texas.
- Understand the colonial governments that existed during the early development of Texas.
- Identify states and capitals (year-long project).
- Create oral, written, or visual (pictures, maps, charts, graphs, timelines) presentations using social studies information.
- Apply critical thinking skills to locate, organize, and use information from a variety of sources, including technology.
- Demonstrate effective oral and written communication skills using standard grammar, spelling, sentence structure, and punctuation.
- Use problem-solving and decision-making skills, working as individuals and with others, in a variety of settings.

Outside of School:

As parents, you can provide opportunities for your 4th grader to

- Use reference materials such as a dictionary, atlas, newspaper, magazines, and encyclopedias.
- Talk about appropriate current events using newspapers and television as sources.
- Use maps to practice locating places in the community and around the world.
- Demonstrate ways to find answers to questions in written material.
- Watch movies or documentaries of historical value.
- Practice and play games to learn states and capitals.
- Use the “Texas State Travel Information” to plan vacations in Texas (1-800-452-9292).
- Visit the public library and local museums.
- Read non-fiction books and materials such as biographies.
- Listen to family stories.