Norfolk Public Schools
The cornerstone of a proudly diverse community

PARENT AND STUDENT GUIDE

Fourth Grade Concepts and Skills

Prepared by:
Department of Curriculum and Instruction

A MESSAGE FROM THE SUPERINTENDENT

Dear Parents,

Welcome to another wonderful year of teaching and learning in Norfolk Public Schools! We are excited about joining with you to educate all students to be successful, productive contributors to society. We strive for all students to become powerfully literate. We have developed this parent guide to serve as a tool for you to stay involved in the learning process, and to assist you at home in strengthening your child's knowledge and skills in the core academic content.

This guide contains the state and local standards of learning in English, mathematics, science and history/social science. At the end of the guide, helpful hints for home are provided for you to use to enrich, enhance and strengthen your child's knowledge and skills in the various contents. Additionally, a calendar of important school dates is provided on the NPS website to help you keep track of holidays, early release days, parent conference day, and other important information.

Please use this guide at home as you partner with us in delivering a rigorous academic program to enable all students to become powerfully literate. If you need any assistance or additional ideas on how to use this guide or if you need other assistance with your child's education please contact your school. Finally, I look forward to working with you and the staff of Norfolk Public Schools to provide powerful teaching and learning opportunities to ensure the academic success of all of our students.

Sincerely,

Dr. Melinda J. Boone
Superintendent of Schools

What We Believe

The mission of Norfolk Public Schools, the cornerstone of a proudly diverse community, is to ensure that all students maximize their academic potential, develop skills for lifelong learning and are successful contributors to a global society, as distinguished by:

- Courageous advocacy for all students
- Family and community investment
- Data-driven personalized learning
- Strong and effective leadership teams
- Shared responsibility for teaching and learning
- Access to rigorous and rewarding college and career readiness opportunities

Board & Division Priorities

- Ensure full accreditation
- Increase academic achievement of all students
- Improve climate, safety & attendance
- Become a School Board of Distinction
- Promote Norfolk Public Schools to reflect outstanding accomplishments of staff, teachers and students
- Develop and coordinate a capital improvement plan for facilities and technology to enhance teaching and learning
- Attract, retain, and help to develop strong academic families and highly qualified teachers and staff

ENGLISH

In <u>SPEAKING, LISTENING, AND MEDIA LITERACY,</u> your child will:

- Use effective oral communication skills in a variety of settings.
- Present accurate directions to people and groups.
- Contribute to group discussions and seek the ideas of others.
- Begin to use evidence to support opinions.
- Tell and summarize events in sequential order.
- Distinguish fact from opinion and support opinions.
- Make and listen to oral presentations and reports.
- Use content information and vocabulary.
- Listen to and record information.
- Create and use simple visuals that enhance presentations.
- Use language and style appropriate to the audience, topic, and purpose.

In <u>READING/LITERATURE</u>, your child will:

- Learn the meanings of unfamiliar words.
- Use context to clarify meanings of unfamiliar words.
- Use word-reference materials.
- Read fiction and non-fiction.
- Describe factors that contribute to the author's purpose.
- Recognize and comprehend story elements and genre.
- Use text organizers such as type, headings, and graphics to predict and categorize information.
- Summarize selections, identifying important ideas and details.
- Make, confirm, or revise predictions.
- Identify signal words to determine text structure.
- Write about what is read.
- Recognize main idea and supporting details.
- Use graphics to organize information.
- Compare and contrast information.
- Understand cause/effect and fact and opinion.
- Read, interpret, and follow written directions.
- Read and write a variety of poetry.

- Identify sensory words and their effects on readers.
- Become aware of when they do not understand, (e.g., by reflecting upon and learning to articulate what exactly is causing difficulty).

In <u>WRITING,</u> your child will:

- Write effective narratives and explanations.
- Focus on one aspect of a topic.
- Develop a plan for writing and organize information appropriately.
- Use elements of style, including word choice, tone, voice and sentence variation.
- Edit writing for grammar, capitalization, punctuation, and spelling.
- Maintain a consistent point-of-view.
- Revise writing by adding details, improving vocabulary, deleting extraneous information, and combining and rearranging sentences.
- Develop and use a variety of sentence types with correct punctuation.
- Use correct subject-verb agreement.
- Include prepositional phrases in writing.
- Eliminate double negatives in writing.
- Use correct spelling for frequently used words, including common homophones.
- Use singular possessives.

In <u>RESEARCH,</u> your child will:

- Collect information from multiple resources including online, print, and media.
- Construct questions about a topic.
- Collect information, using the media center.
- Evaluate and synthesize information for use in writing.
- Use available technology.
- Take notes on information gathered.
- Summarize information learned in writing.
- Use graphic organizers to organize and display information.
- Give credit to sources used in research.
- Understand the difference between plagiarism and using own words.

MATH

In <u>NUMBER SENSE,</u> your child will:

- Read and write 7-digit numbers and identify the value of each digit using a variety of representations and models.
- Compare two numbers (0 - 9,999,999) using the symbols <, >, and =.
- Round to the nearest million, hundred thousand, and/or ten thousand (up to7 digits).
- Identify, model, and compare fractions and mixed numbers; represent equivalent fractions through twelfths.
- Relate fractions to decimals for halves, fourths, fifths, and tenths using models.
- Compare and order fractions having like and unlike denominators (twelve or less) using models and symbols <, >, and =.
- Read, write, and model decimals through hundredths; round to the nearest whole number or tenth, and compare two decimals using symbols <, >, and =.

In <u>COMPUTATION AND ESTIMATION,</u> your child will:

- Estimate sums and differences and describe method of estimation.
- Add and subtract whole numbers (up to 5 digits) and estimate for reasonableness.
- Solve single-step and multistep problems using whole number operations.
- Recall multiplication and division facts (through the nines table) with <u>speed</u> and <u>accuracy</u>.
- Multiply two whole numbers (up to 3-digits x 2-digits).
- Divide a 2-digit or 3-digit number by a 1-digit divisor with and without remainders.
- Add and subtract fractions with like and unlike denominators (denominators of twelve or less) using models and simplifying results.
- Add and subtract decimals expressed as thousandths.

In <u>MEASUREMENT</u>, your child will:

- Measure to the nearest eighth of an inch.
- Determine the appropriate unit needed to estimate and accurately measure weight (ounces, pounds, grams, and kilograms), temperature, and liquid volume (cups, pints, quarts, gallons, liters, and milliliters) in U.S. Customary and metric units
- Determine elapsed time in hours and minutes within a 24-hour period.

In <u>GEOMETRY</u>, your child will:

- Identify points, lines, line segments, rays, and angles.
- Identify lines that are parallel, intersecting, and perpendicular.
- Compare and recognize the relationship between plane (parallelogram and rhombus) and solid (prisms) figures.
- Identify and describe translations, reflections, and rotations.
- Identify polygons by name with 10 or fewer sides.

In <u>PROBABILITY AND STATISTICS,</u> your child will:

- Represent probability as a point between 0 and 1, inclusively, on a number line.
- Collect, organize, and display data in a variety of graphs (bar, line, circle, and line plots) including increments greater than 1 and properly labeled.

In <u>PATTERNS, FUNCTIONS, AND ALGEBRA,</u> your child will:

- Describe, extend, and create geometric and numerical patterns, using tables, symbols, or words.
- Write an equation to represent equivalent mathematical relationships (4x3 = 2x6).
- Investigate and describe the associative property for addition and multiplication.

SCIENCE

In <u>INVESTIGATION, REASONING AND LOGIC</u>, your child will:

- Analyze variables in experimental inquiries and decide which variables must be held constant.
- Distinguish among observations, predictions, inferences, and conclusions.
- Classify and arrange objects and events according to characteristics and properties.
- Collect and record data using metric measures and communicate the data with simple graphs, pictures, written statements, and numbers.
- Construct models to clarify scientific explanations, demonstrate relationships and solve needs.
- Select appropriate instruments to measure length, mass, volume, temperature and time.
- Formulate hypotheses based on cause/effect relationships.
- Identify numerical data that are contradictory or unusual in an experimental result.
- Make predictions and inferences based on data from various sources.

In <u>FORCE, MOTION AND ENERGY,</u> your child will:

- Investigate why forces cause changes in an object's motion.
- Investigate the effects of friction on motion.
- Investigate the kinetic energy of moving objects.
- Investigate the characteristics of electricity.
- Differentiate between conductors and insulators, open and closed circuits, and parallel and series circuits.
- Investigate static electricity.
- Investigate the transformation of electrical energy into heat (thermal), light (radiant), and mechanical energy.
- Construct a simple electromagnet.
- Investigate the historical contributions that led to the understanding of electricity.

In <u>LIFE PROCESSES,</u> your child will:

- Investigate the basic structure of typical plants (leaves, stems, roots, and flowers) and their function.
- Identify the processes and structures involved with plant reproduction (pollination, stamen, pistil, stigma, sepal, embryo, spore, and seed).
- Investigate the process of photosynthesis.
- Investigate adaptations that allow plants to satisfy life needs and respond to the environment.

In <u>LIVING SYSTEMS,</u> your child will:

- Investigate how plants and animals interact with living and nonliving components in an environment.
- Distinguish between the behavioral and structural adaptations of plants and animals.
- Describe the flow of energy through a food web.
- Distinguish between habitats and niches.
- Describe changes in an organism's niche at various stages in its life cycle.
- Investigate the influence of human activity on ecosystems.

In <u>EARTH/SPACE SYSTEMS,</u> your child will:

- Investigate how weather conditions and phenomena occur and can be predicted.
- Identify weather phenomena such as fronts, clouds, and storms.
- Use weather measurements and weather phenomena to make weather predictions.
- Investigate the organization of the solar system.

In <u>EARTH PATTERNS, CYCLES AND CHANGE,</u> your child will:

- Demonstrate how rotation and revolution produce cycles of daylight, seasons, and phases of the moon.
- Identify the causes for seasons and phases of the moon.
- Investigate the relative size, position, age, and makeup of the Earth, moon, and sun.
- Identify historical contributions that led to the understanding of the Earth-moon-sun system.

HISTORY/ SOCIAL SCIENCE

In <u>HISTORICAL CONNECTIONS,</u> your child will:

- Study Virginia's early exploration, settlements, and cultural developments.
- Identify different perspectives that led to major conflicts (e.g., Revolutionary War, Civil War).
- Describe the contributions of various ethnic and cultural groups in Virginia's history.
- Explain how Virginians played an active role in the colonists' struggle for independence.
- Identify Virginia's role in the fighting of the Civil War.

In <u>ECONOMIC UNDERSTANDING,</u> your child will:

- Explain the role of money, banking, saving, and credit in colonial Virginia.
- Describe the accomplishments and the economic contributions of Harry F. Byrd, Sr. and Maggie L. Walker.

In <u>CITIZENSHIP,</u> your child will:

- Understand that the competing interests of people and government can lead to conflict.
- Explain how the ideas of Virginians were the basis for the principles of the new government of the United States.

In <u>GEOGRAPHIC AWARENESS,</u> your child will:

- Locate and identify on maps and globes Norfolk, Virginia, the United States, the regions of North America, and other places important to the development of Virginia.
- Analyze and interpret maps to explain relationships among landforms and water features.

In <u>RESOURCES,</u> your child will:

- Construct physical maps and three-dimensional models of Virginia and the United States.
- Explain the cultural differences of American Indians living in Virginia.

- Describe how geography shaped the expansion and development of Virginia.
- Recognize cultural changes in Virginia as they relate to geography and history.

In <u>HISTORY/SOCIAL SCIENCE SKILLS</u>, your child will:

- Sequence events in Virginia history.
- Distinguish fact from fiction by comparing primary sources.
- Compare and contrast historical events.
- Determine cause and effect relationships.

Helpful Hints for Home

English

- Set aside a time and a place for your child to read for at least 20-30 minutes a day.
- Make sure your child has a large supply of fiction and non-fiction materials he or she can read.
- Discuss materials your child is reading.
- Help your child write letters to friends and relatives.
- Encourage your child to keep a journal.
- Make "to-do" lists with your child.
- Enjoy and discuss your child's writing.
- Keep a file with stories written by family members.

Math

- Use sports statistics or weather information in the newspaper or from television and have your child calculate averages or sequence numbers. Ask questions like which temperature was higher, what was the lowest score, how many points did the winning team win by? Have your child do a number search. The object is to look for numbers around you: on cars, buses, houses, signs, etc. Talk about the numbers your child has collected (what was the largest number found, are there any odd numbers, what would you get if you added/subtracted two of the numbers, etc.).
- Give your child various opportunities to create graphs (line graphs, bar graphs or picture graphs). For example, give your child 20-30 pennies and have him sort and line them up by date and tell you which date has the most/least/same.
- Have your child make a picture puzzle to illustrate various numbers. For example, choose some symbol that your child can easily draw to stand for 1's and 10's (for older children you can include 100s and 1,000s). List some numbers and have your child depict them. For example, if _ = 10 and _ = 1, then the number 15 would be drawn _____.

- Have your child use a deck of cards to learn about the relationships of numbers (more/less) and about subtracting, adding, multiplying, and dividing numbers. For example, remove all face cards from a deck (kings, queens, jacks) and divide the remaining cards between two people. Place the cards face down. Each player turns over one card and makes a comparison statement: Is it more or less? How much more? How much less? Added together they would equal _____. Subtracted they would equal _____. Multiplied they would equal _____. Divided they would equal _____.
- Make a set of flash cards with numbers on them. Have your child draw a card and look at the number (example 25) and see how many different addition or subtraction problems he/she can think of that have an answer of 25.

Science

- Have your child interpret simple charts and graphs found in the newspaper or in magazines.
- Have your child illustrate or create basic circuits.
- Have your child identify the structures of a typical house or garden plant and explain how these structures help the plant meet its needs.
- Dissect a flower with your child and have your child identify the reproductive parts.
- Have your child draw meteorological tools and explain to you their function.
- Listen to a local weather report on television and have your child explain weather phenomena to you.
- Have your child explain the reason for the seasons and the phases of the moon.
- Have your child identify important Virginia natural resources found in your neighborhood and explain their importance.
- Review with your child the key vocabulary discussed in each unit.

History/Social Science

- Visit museums, government buildings, national parks and other historic sites.
- Make globes, maps and the Internet available to your child and use every opportunity to refer to them.
- Read with your child about people and events that have made a difference in the world and discuss the readings together.
- Have your child use maps to plan the route for a trip or vacation.
- Work with your child to track a hurricane.

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