North Kansas City Schools Parent Guide to the Grade Card



Grade 4 Parent Guide

Grade 4 Measurement Topics and Descriptions

Explanation of Reading Levels

(Fountas & Pinnell (1996) Guided reading: Good first teaching for all children. p.177; Jan Richardson (2016) The Next Step Forward in Guided Reading)) **Emergent (EM) Description** Early (EA) Description Transitional (TR) Description Fluent (FL) Description **Emergent Readers:** Early Readers: Transitional Readers: Fluent Readers: heavily rely on information from rely less on pictures and use more have full control of early use all sources of information pictures flexibly information from print strategies • may attend to and use some have increasing control of early • use multiple sources of • solve problems in an independent features of print reading strategy information while reading for wav • may notice how print is used know several frequently used words meaning • read with phrasing and fluency • may know some words automatically • integrate the use of cues • extend their understanding by • read using more than one source of • have a large core of frequently reading a wide range of texts for • use the introduced language pattern of books information used words different purposes • read familiar texts with phrasing and • notice pictures but rely very little • read for meaning, solving problems respond to texts by linking meaning with their own fluencv on pictures to read the text in an independent way experience exhibit behaviors indicating strategies • for the most part, read fluently • continue to learn from reading begin to make links between their such as monitoring, searching, crosswith phrasing read much longer, more own oral language and print checking, and self-correction read longer, more complex texts complicated texts read a variety of genres

Reading Performance

Independent reading performance (what a child can do without support) will be reported out in two ways. The child's independent reading stage will be provided and whether their reading performance is at grade level (=), above grade level (+), or below grade level (-) expectations for that quarter.

English Language Arts

Reading Foundational Skills

Students will know and apply grade-level phonics and words analysis skills (use roots and affixes to read unfamiliar multisyllabic words in and out of context) in decoding words. Students will also read on-level text with purpose, accuracy, and understanding.

Reading Fiction and Non-Fiction Text

Students will read widely and deeply from among a broad range of high-quality, increasingly challenging literary and informational texts. Through extensive reading of stories, dramas, and poems from diverse cultures and different time periods, students gain literary and cultural knowledge as well as familiarity with various text structures and elements.

Writing

Students will compose a variety of texts (opinion, informative/explanatory, narrative) that are clear and coherent in which the development and organization are appropriate to task, purpose and audience. Students will conduct research projects to build knowledge about a topic. With guidance and support from peers and adults, students will develop and strengthen writing as needed by planning, revising, and editing.

<u>Language</u>

Students will demonstrate command of the conventions of standard English grammar, usage, and mechanics when writing, speaking, reading, and listening. They must also be able to determine or clarify the meaning of grade-level appropriate words encountered through listening, reading, and media use; come to appreciate that words have nonliteral meanings, shades of meaning, and relationships to other words; and expand their vocabulary in the course of studying content.

Listening and Speaking

Students will effectively engage in a range of collaborative discussions with diverse partners on *grade 4* topics and texts, building on others' ideas and expressing their own clearly. Students will also differentiate between contexts that call for formal English and situations where informal discourse is appropriate.

Mathematics

Number Sense and Operations in Base Ten

Students will round multi-digit whole numbers to any place; read, write and identify multi-digit whole numbers up to one million using number names, base ten numerals and expanded form; compare two multi-digit numbers using the symbols >, = or <, and justify the solution; understand that in a multi-digit whole number, a digit represents 10 times what it would represent in the place to its right; demonstrate fluency with addition and subtraction of whole numbers; multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, and justify the solution; and, find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, and justify the solution.

Number Sense and Operations in Fractions

Students will explain and/or illustrate why two fractions are equivalent; recognize and generate equivalent fractions; compare two fractions using the symbols >, = or <, and justify the solution; understand addition and subtraction of fractions as joining/composing and separating/decomposing parts referring to the same whole; decompose a fraction into a sum of fractions with the same denominator and record each decomposition with an equation and justification; solve problems involving adding and subtracting fractions and mixed numbers with like denominators; apply and extend previous understandings of multiplication to multiply a fraction by a whole number; solve problems involving multiplication of a fraction by a whole number; use decimal notation for fractions with denominators of 10 or 100; understand that fractions and decimals are equivalent representations of the same quantity; read, write and identify decimals to the hundredths place using number names, base ten numerals and expanded form; and, compare two decimals to the hundredths place using the symbols >, = or <, and justify the solution.

Relationships and Algebraic Thinking

Students will multiply or divide to solve problems involving a multiplicative comparison; solve multi-step whole number problems involving the four operations and variables and using estimation to interpret the reasonableness of the answer; solve whole number division problems involving variables in which remainders need to be interpreted, and justify the solution; recognize that a whole number is a multiple of each of its factors and find the multiples for a given whole number; determine if a whole number within 100 is composite or prime, and find all factor pairs for whole numbers within 100; generate a number pattern that follows a given rule; and, use words or mathematical symbols to express a rule for a given pattern.

Geometry and Measurement

Students will draw and identify points, lines, line segments, rays, angles, perpendicular lines and parallel lines; classify two-dimensional shapes by their sides and/or angles; construct lines of symmetry for a twodimensional figure; identify and estimate angles and their measure; draw and measure angles in whole-number degrees using a protractor; know relative sizes of measurement units within one system of units; use the

North Kansas City Schools

four operations to solve problems involving distances, intervals of time, liquid volume, weight of objects and money; and, apply the area and perimeter formulas for rectangles to solve problems.

Data and Statistics

Students will create a frequency table and/or line plot to display measurement data; solve problems involving addition and subtraction by using information presented in a data display; and, analyze the data in a frequency table, line plot, bar graph or picture graph.

Standards for Mathematical Practice

The Standards for Mathematical Practice describe varieties of expertise we work to develop in our students. In doing so, we expect students to make sense of problems and persevere in solving them; reason abstractly and quantitatively; construct viable arguments and critique the reasoning of others; model with mathematics; use appropriate tools strategically; attend to precision; look for and make use of structure; and, look for and make use of regularity in repeated reasoning.

Science

Engineering, Technology and Application

Students will plan and carry out fair tests in which variables are controlled and failure points are considered, as well as identify aspects of a model or prototype that can be improved. Students generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. Students will define a simple design problem reflecting a need or want that includes specified criteria for success and constraints on materials, time, or cost.

Life Science

Structure and Function of Plants and Animals

Students will construct an argument that plants and animals have internal and external structures that help the organism to grow, respond to stimulus, survive, and reproduce.

Information Processing

Students will use a model to describe how animals receive information through their senses, process that information in their brain, and respond to the information in different ways.

Physical Science

Force and Motion

Students will plan and conduct an investigation to show evidence of the effects of balanced and unbalanced forces on the motion of an object.

Types of Interactions

Students will plan and conduct investigations to determine the cause and effect relationship between electric or magnetic interactions between two objects that are not touching. Students will plan and conduct a fair test to compare and contrast the forces required to overcome friction when an object moves over different surfaces. Students will use information they have gathered to predict how changes in the amount of force or the mass of an object affects the motion of that object.

Energy

Students will construct an explanation relating the speed of an object to the energy of that object. Students will design, test and refine a device that converts energy from one form to another.

Simple Machines

Students will use models to explain that simple machines change the amount of effort force needed and/or the direction of the force.

Waves

Students will create a model of waves so they can describe patterns in terms of wavelength and amplitude.

Earth Science

History of Earth

Students will use evidence from rock layers and fossils to describe changes in the landscape over time.

Plate Tectonics and Surface Changes

Students will analyze data from maps to describe patterns of Earth's features such as mountains, volcanoes, and the ocean floor. Students will also conduct investigations to provide evidence that weathering and erosion change these features on Earth.

Natural Hazards

Students will create and compare solutions to reduce the impact of natural disasters, such as earthquakes and volcanoes, on humans.

Social Studies

Democracy

Students will understand rights as included in the Bill of Rights; explain the purpose of the Constitution and Bill of Rights; explain why Missouri has a Constitution and why States make and enforce laws.

Expansion and Diffusion

Students will summarize major events of the Westward Expansion and understand the importance of the Louisiana Purchase. Students will also learn about settlements in Missouri founded by people of European Heritage.

Economics

Students will understand the concept of supply and demand and how states collect money (taxes) to support the primary functions of the state. Students will also compare saving and investing; interpret past, explain present and predict future consequences of economic decisions.

Conflict and Cooperation

Students will understand Missouri's role in the Civil War. Geography and Geographic Tools

Students will understand how human characteristics of locations in the U.S. changed due to Westward Expansion. Students will also construct and interpret maps while being able to locate Kansas City, St. Louis, Springfield, St. Joseph, Jefferson City, and Columbia.

U.S. Documents and Symbols

Students will be able to explain the major purpose of the Constitution and the Bill of Rights.

North Kansas City Schools

Influential Individuals

Students will understand the major contributions of Thomas Jefferson.

People, Places and the Environment

Students will understand the effect that environment has on the lives of people and how people adapt to the environment in order to meet their needs. Students will also compare different regions of the United States while also using geography to interpret the past.