

Math



3rd Grade Math



Operations and Algebraic Thinking

Represent and solve problems involving multiplication and division.

OA1	Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7 .
OA2	Interpret whole number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares (How many in each group?), or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each (How many groups can you make?).
OA3	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
OA4	Determine the unknown whole number in a multiplication or division equation relating three whole numbers using the inverse relationship of multiplication and division.

Understand properties of multiplication and the relationship between multiplication and division.

OA5	Apply properties of operations as strategies to multiply and divide. 4 Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)
OA6	Understand division as an unknown-factor problem. For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.

Multiply and divide within 100.

OA7	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
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Number and Operations in Base Ten

Use place value understanding and properties of operations to perform multi-digit arithmetic

NBT1	Use place value understanding to round whole numbers to the nearest 10 or 100.
NBT2	Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Use place value understanding and properties of operations to perform multi-digit arithmetic.

NBT3	Multiply one-digit whole numbers by multiples of 10 in the range 10–90. numbers by multiples of 10 in the range 10–90 (e.g., 9×80 , 5×60) using strategies based on place value and properties of operations.
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Measurement and Data

Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.

MD1 Tell and write time to the nearest minute and measure elapsed time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram, drawing a pictorial representation on a clock face, etc.

MD2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.

Represent and Interpret Data

MD3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.

MD4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.

Understand concepts of area and relate area to multiplication and to addition and recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

MD5 Recognize area as an attribute of plane figures and understand concepts of area measurement.
a. A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area.
b. A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.

MD6 Measure areas by counting unit squares (square cm, square m, square in, square ft., and improvised units).

MD7 Relate area to the operations of multiplication and addition.
a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.
b. Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
c. Whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reason

MD8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

Geometry

Reason with shapes and their attributes.

G1 Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.

G2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole.

Representing and Comparing Fractions

Develop understanding of fractions as numbers

NF1	Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts (unit fraction); understand a fraction a/b as the quantity formed by a parts of size $1/b$.
NF2	Understand a fraction as a number on the number line; represent fractions on a number line diagram. a. Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/b$. Recognize that a unit fraction $1/b$ is located $1/b$ whole unit from 0 on the number line. b. Represent a non-unit fraction a/b on a number line diagram by marking off a lengths of $1/b$ (unit fractions) from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the non-unit fraction a/b on the number line.
NF3	Explain equivalence of fractions through reasoning with visual fraction models. Compare fractions by reasoning about their size. a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line. b. Recognize and generate simple equivalent fractions with denominators of 2, 3, 4, 6, and 8, e.g., $1/2 = 2/4$, $4/6 = 2/3$. Explain why the fractions are equivalent, e.g., by using a visual fraction model. c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form $3 = 6/2$ (3 wholes is equal to six halves); recognize that $3/1 = 3$; locate $4/4$ and 1 at the same point of a number line diagram. d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or

Notes

Reading



3rd Grade Reading



Reading Literary

Key Ideas and Details

RL1	Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
RL2	Recount stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text.
RL3	Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.

Craft and Structure

RL4	Determine the meaning of words and phrases both literal and nonliteral language as they are used in the text.
RL5	Refer to parts of stories, dramas, and poems when writing or speaking about a text, using terms such as chapter, scene, and stanza; describe how each successive part builds on earlier sections.
RL6	Distinguish their own point of view from that of the narrator or those of the characters.

Integration of Knowledge and Ideas

RL7	Explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story (e.g., create mood, emphasize aspects of a character or setting).
RL9	Compare and contrast the themes, settings, and plots of stories written by the same author about the same or similar characters (e.g., in books from a series).

Range of Reading and Level of Text Complexity

RL10	By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 2-3 text complexity band independently and proficiently.
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Reading Informational

Key Ideas and Details

RI1	Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
RI2	Determine the main idea of a text; recount the key details and explain how they support the main idea.
RI3	Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.

Craft and Structure

RI4	Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.
RI5	Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic quickly and efficiently.

RI6	Distinguish their own point of view from that of the author of a text.
Integration of Knowledge and Ideas	
RI7	Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).
RI8	Describe the logical connection between particular sentences and paragraphs in a text (e.g., comparison, cause/effect, first/second/third in a sequence).
RI9	Compare and contrast the most important points and key details presented in two texts on the same topic.

Range of Reading and Level of Text Complexity

RI10	By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2-3 text complexity band independently and proficiently.
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Reading Foundational

Phonics and Word Recognition

RF3	<p>Know and apply grade-level phonics and word analysis skills in decoding words.</p> <ol style="list-style-type: none"> Identify and know the meaning of the most common prefixes and suffixes. Decode words with common Latin suffixes. Decode multi-syllable words.
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Fluency

RF4	<p>Read with sufficient accuracy and fluency to support comprehension.</p> <ol style="list-style-type: none"> Read on-level text with purpose and understanding. Read on-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings. Use context to confirm or self-correct word recognition and understanding, rereading as necessary. Read grade-appropriate irregularly spelled words.
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Writing

Text Types and Purposes

W1	Write opinion pieces on topics or texts, supporting a point of view with reasons.
W2	Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
W3	ELAGSE3W3: Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

Production and Distribution of Writing

W4	With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose. (Grade-specific expectations for writing types are defined in standards 1-3 above.)
W5	With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 3.)

Research to Build and Present Knowledge

W6	With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others.
W7	Conduct short research projects that build knowledge about a topic.
W8	Recall information from experience or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.
W10	Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Speaking and Listening

Comprehension and Collaboration

SL1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
SL2	Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
SL3	Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.

Presentation of Knowledge and Ideas

SL4	Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.
SL5	Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details.
SL6	Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification. (See grade 3 Language standards 1 and 3 for specific expectations.)

Language

Conventions of Standards English

L1	<p>Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.</p> <ol style="list-style-type: none">Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences.Form and use regular and irregular plural nouns.Use abstract nouns (e.g., childhood).Form and use regular and irregular verbs.Form and use the simple (e.g., I walked; I walk; I will walk) verb tenses.Ensure subject-verb and pronoun-antecedent agreement.*Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what is to be modified.Use coordinating and subordinating conjunctions.Produce simple, compound, and complex sentences.Writes legibly in cursive.
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L2	<p>Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.</p> <ol style="list-style-type: none"> Capitalize appropriate words in titles. Use commas in addresses. Use commas and quotation marks in dialogue. Form and use possessives. Use conventional spelling for high-frequency and other studied words and for adding suffixes to base words (e.g., sitting, smiled, cries, happiness). Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.
Knowledge of Language	
L3	<p>Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <ol style="list-style-type: none"> Choose words and phrases for effect.* Recognize and observe differences between the conventions of spoken and written standard English
Vocabulary Acquisition and Use	
L4	<p>Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies.</p> <ol style="list-style-type: none"> Use sentence-level context as a clue to the meaning of a word or phrase. Determine the meaning of the new word formed when a known affix is added to a known word (e.g., agreeable/disagreeable, comfortable/uncomfortable, care/careless, heat/preheat). Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., company, companion). Use glossaries or beginning dictionaries, both print and digital, to determine or clarify the precise meaning of key words and phrases.
L5	<p>With guidance and support from adults, demonstrate understanding of word relationships and nuances in word meanings.</p> <ol style="list-style-type: none"> Distinguish the literal and non-literal meanings of words and phrases in context (e.g., take steps). Identify real-life connections between words and their use (e.g., describe people who are friendly or helpful). Distinguish shades of meaning among related words that describe states of mind or degrees of certainty (e.g., knew, believed, suspected, heard, wondered).
L6	<p>Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific vocabulary, including words and phrases that signal spatial and temporal relationships (e.g., After dinner that night we went looking for them).</p>

Notes

Science



3rd Grade Science



Earth Science

E1	<p>Obtain, evaluate, and communicate information about the physical attributes of rocks and soils.</p> <ol style="list-style-type: none">Ask questions and analyze data to classify rocks by their physical attributes (color, texture, luster, and hardness) using simple tests.Plan and carry out investigations to describe properties (color, texture, capacity to retain water, and ability to support growth of plants) of soils and soil types (sand, clay, loam).Make observations of the local environment to construct explanation of how water and/or wind have made changes to soil and/or rocks over time.
E2	<p>Obtain, evaluate, and communicate information on how fossils provide evidence of past organisms.</p> <ol style="list-style-type: none">Construct an argument from observations of fossils (authentic or reproductions) to communicate how they serve as evidence of past organisms and the environments in which they lived.Develop a model to describe the sequence and conditions required for an organism to become fossilized.

Physical Science

P1	<p>Obtain, evaluate, and communicate information about the ways heat energy is transferred and measured.</p> <ol style="list-style-type: none">Ask questions to identify sources of heat.Plan and carry out an investigation to gather data using thermometers to produce tables and charts that illustrate the effect of sunlight on various objects.Use tools and every day materials to design and construct a device/structure that will increase/decrease the warming effects of sunlight on various materials.
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Life Science

L1	<p>Obtain, evaluate and communicate information about the similarities and differences between plants, animals, and habitats found within geographic regions (Blue Ridge Mountains, Piedmont, Coastal Plains, Valley and Ridge, and Appalachian Plateau) of Georgia.</p> <ol style="list-style-type: none">Ask questions to differentiate between plants, animals, and habitats found within Georgia's geographic regions.Construct an explanation of how external features and adaptations (camouflage, use of hibernation, protection, migration, mimicry) of animals allow them to survive in their habitat.Use evidence to construct an explanation of why some organisms can thrive in one habitat and not in another.
L2	<p>Obtain, evaluate, and communicate information about the effects of pollution (air, land, and water) and humans on the environment.</p> <ol style="list-style-type: none">Ask questions to collect information and create records of sources and effects of pollution on the plants and animals of Georgia.Explore, research, and communicate solutions, such as conservation of resources and recycling materials to protect plants and animals of Georgia.

Social Studies

3rd Grade Social Studies



Historical Understandings

H1	<p>Describe early American Indian cultures and their development in North America.</p> <ol style="list-style-type: none">Locate the regions where American Indians settled in North America: Arctic, Northwest, Southwest, Plains, Northeast, and Southeast.Compare and contrast how American Indians in each region used their environment to obtain food, clothing, and shelter.Discuss how American Indians continue to contribute to American life (e.g., arts and literature).
H2	<p>Describe European exploration in North America.</p> <ol style="list-style-type: none">Describe the reasons for and obstacles to the exploration of North America.Describe the accomplishments of: John Cabot (England), Vasco Nunez de Balboa (Spain), Hernando de Soto (Spain), Christopher Columbus (Spain), Henry Hudson (The Netherlands), and Jacques Cartier (France).Describe examples of cooperation and conflict between European explorers and American Indians.
H3	<p>Explain the factors that shaped British Colonial America.</p> <ol style="list-style-type: none">Identify key reasons why the New England, Mid-Atlantic, and Southern colonies were founded (religious freedom and profit).Compare and contrast colonial life in the New England, Mid-Atlantic, and Southern colonies (education, economy, and religion).Describe colonial life in America from the perspectives of various people: large landowners, farmers, artisans, women, children, indentured servants, slaves, and American Indians.

Geography

G1	<p>Locate major topographical features on a physical map of the United States. Obtain, evaluate, and communicate information about the similarities and differences between plants, animals, and habitats found within geographic regions (Blue Ridge Mountains, Piedmont, Coastal Plains, Valley and Ridge, and Appalachian Plateau) of Georgia. (Knowledge)</p> <ol style="list-style-type: none">Locate major rivers of the United States of America: Mississippi, Ohio, Rio Grande, Colorado, Hudson, and St. Lawrence.Locate major mountain ranges of the United States of America: Appalachian, Rocky.
G2	<p>Locate and describe the equator, prime meridian, and meridian, and lines of latitude and longitude on a globe.</p>
G3	<p>Describe how physical systems affect human systems.</p> <ol style="list-style-type: none">Explain why American Indian groups occupied the areas they did, with emphasis on why some developed permanent villages and others did not.

Government/Civic Understanding

CG1	<p>Describe the elements of representative democracy/republic in the United States.</p> <ol style="list-style-type: none">Describe the three branches of national government: executive (president), legislative (Congress), and judicial (Supreme Court of the United States).Describe the three branches of state government: executive (governor), legislative (Georgia General Assembly), and judicial (Supreme Court of Georgia).State the main responsibility of each branch: executive (enforcing laws), legislative (making laws), judicial (determining if laws are fair).
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Government/Civic Understanding

CG2	<p>Explain the importance of Americans sharing certain central democratic beliefs and principles, both personal and civic.</p> <ol style="list-style-type: none">Explain the necessity of respecting the rights of others and promoting the common good.Explain the necessity of obeying reasonable laws/rules voluntarily, and explain why it is important for citizens in a democratic society to participate in public (civic) life (staying informed, voting, volunteering, and communicating with public officials).
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Economic Understanding

E1	<p>Define and give examples of the four types of productive resources.</p> <ol style="list-style-type: none">NaturalHumanCapitalEntrepreneurship
E2	<p>Explain that governments provide certain types of goods and services in a market economy (schools, libraries, roads, police/fire protection, and military) and pay for these through taxes.</p>
E3	<p>Give examples of interdependence and trade and explain the benefits of voluntary exchange.</p> <ol style="list-style-type: none">Describe the interdependence of consumers and producers.Describe how goods and services are allocated by price in the marketplace.Explain that some goods are made locally, some elsewhere in the county, and some other countries.Explain that most countries create their own currency for use as money.
E4	<p>Explain the concept of opportunity cost as it relates to making a saving or spending choices.</p>

MGS IPSI	MGS1-9 IPSI1-13
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