

5TH

A FAMILY GUIDE FOR STUDENT SUCCESS

FIFTH GRADE

Concepts of Literacy and Mathematics



Maryland

STATE DEPARTMENT OF EDUCATION

The Maryland State Department of Education would like to thank the Mississippi Department of Education for allowing the adaptation and incorporation of this guide to support Maryland families and children.

MARYLAND STATE DEPARTMENT OF EDUCATION

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Deaf and Hard of Hearing Use Relay

Dear Families,

Parents and guardians are their child's first teachers, and your insight is essential to helping your child succeed. When families and educators work closely together, students benefit.

The Family Guide for Student Success outlines the key literacy and math skills your child will learn from pre-kindergarten through eighth grade. These guides show what students should know by the end of each grade and support your child in meeting Maryland's learning expectations.

Your partnership with your child's teacher makes the biggest difference. Stay in communication, ask questions, and reach out for ideas or activities to support learning at home. If you have questions about curriculum or school programs, please contact your child's school.

This guide is here to help us set clear expectations, strengthen skills, and support every child's growth, together.



Carey M. Wright, Ed.D.,
State Superintendent of Schools

HOW TO USE THE FAMILY GUIDES

In the guide that follows, you will notice that some tips have special symbols next to them. These symbols show which children might find that tip most helpful, since every child learns differently.

Use the key below to help you choose the tips that are most helpful for your child:



CIRCLE: For Children Learning English

Look for this symbol if your child is learning English as another language. These tips are great for building language skills while working on building reading and math skills. All of the activities can be completed in your child's home language as well as English.



SQUARE: For Children Who Need a Little Extra Help

This symbol means the tip might be especially helpful for children who need more time or practice to really understand a skill. These ideas can help make learning feel easier and less frustrating.



TRIANGLE: For Children Who Are Ready for a Challenge

If your child already understands a skill and is ready for something more, look for this symbol. These tips offer fun ways to go deeper and keep learning exciting.

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LITERACY

In grade five reading, your child will continue reading and writing, but in addition to stories and literature, your child will read more texts that provide facts and build knowledge while drawing on your child's background knowledge about other subjects, including science and social studies. They will read more challenging texts and be asked questions that will require them to refer back to what they have read. There will also be an increased emphasis on building a strong vocabulary so that your child can read and understand more challenging material. Your child will be expected to understand and clearly summarize what they have learned from readings and classroom discussions, referring to specific evidence and details from the text. Activities in these areas may include:

PHONICS AND WORD RECOGNITION

- Reading (decoding) and writing (encoding) words containing a variety of spelling patterns, prefixes and suffixes, with accuracy and automaticity.

FLUENCY

- Refining understanding of fluent reading.
- Reading (decoding) text with accuracy, appropriate rate, and expression (prosody) to support comprehension.

LANGUAGE

- Demonstrating command of the conventions of standard English when writing or speaking.
- Determining or clarifying the meaning of unknown and multiple-meaning words or phrases based on grade 5 reading and content.



COMPREHENSION

- Quoting accurately from the text to explain what it says directly and to figure out ideas that are not stated (drawing inferences).
- Summarizing stories and determining the main message (theme) using details, such as how characters handle problems or what the speaker is reflecting on.
- Comparing and contrasting elements like characters, settings, or events in a story or drama, including how they interact, and comparing different stories that are in the same genre.
- Determining the meaning of words and phrases, including figurative language (like similes and metaphors), and explaining how the parts of a text (chapters, scenes, stanzas) fit together to create the overall structure.
- Describing how the storyteller's point of view changes how events are told, and analyzing how pictures, videos, and other media elements add meaning, feeling (tone), or beauty to the text.
- Explaining how an author uses facts and evidence to support their points, and drawing on information from different sources (books, websites) to find answers quickly, all while reading and understanding challenging grade 5 level literature and informational texts.

SPEAKING AND LISTENING

- Preparing for and taking part in many different kinds of conversations with different people where they listen to and build upon others' thoughts clearly sharing their own ideas.

WRITING

- Planning and writing three main types of writing—essays that argue a viewpoint, reports that explain information, and effective stories—making sure the writing is right for the goal and the reader.

Your child can apply grade level phonics and word analysis skills to read (decode) and write (encode) words.

- Read (decode) and write (encode) words with vowel teams, digraphs, and trigraphs.
- Understand every syllable must have a vowel.
- State the syllables and blend the syllables together to form the word.

HELP AT HOME

- ▶ Write several words with vowel teams on index cards. Have your child circle, highlight, or underline the vowels or vowel teams in each syllable, then have your child read aloud each word (rain, play, sea, pie, feet, meat, bee).
- ▶ Using index cards with words that include vowel teams, have your child sort the cards by vowel teams (bee/feet, rain/train, etc.), then have your child read the words out loud.
- ▶ Have your child write sentences using words with vowel teams, digraphs, or trigraphs.

RESOURCES

VOWEL TEAMS			
 ee	 ay	 oa	 ie
 igh	 ea	 ai	 ow
 y	 y	 ar	 er
 ur	 or	 ir	 oy
 ou	 ew	 oo	 ow
 ue	 aw	 oi	 oo

VOWEL TEAMS

- They come as a team.
- Two vowels next to each other.
- Two letters that come together to make one sound.
- Some vowel teams can be spelled more than one way (e.g., ai-rain; ay-hay).

DIGRAPHS

- ai (rain), ay (day),
 eigh (neighbor)
- oa (boat), oe (toe)
- ew (new)

TRIGRAPHS

- igh (high, nigh, tight)
- air (hair, chair, stair)
- are (dare, share, care)

Image from <http://chaplinschool.org/academics/classrooms/grade-2-mrs-rossi/2nd-grade-resources-reading-foundational-skills/>



Your child can read (decode) and write (encode) multi-syllable words.

- Your child can identify the base word after identifying the prefixes or suffixes of a multi-syllable word.

HELP AT HOME

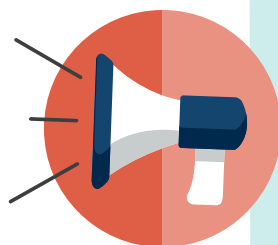
- ▶ Write multi-syllable words from texts your child is reading at home or from school. Have your child circle the prefixes or suffixes of the word. Have your child underline the base, or main part of the word. Ask your child to read each part of the word, then blend each syllable together. Finally, ask your child to write a sentence with the word in it.
- ▶ ▲ Have your child read a sentence from a text that includes a multisyllable word. Then, have them write a new sentence using the multisyllable word. If needed, work with your child to determine the meaning of the word.

VOCABULARY

A **MULTISYLLABLE WORD** is a word that contains more than one syllable. Examples: coffee, pencil, elephant, unable, reconstruct, misinformation, etc.

Your child can read with sufficient accuracy and fluency to support comprehension.

- Understand grade level vocabulary.
- Determine how to read grade level words accurately and repeatedly.
- Read grade level text with accuracy, appropriate rate, and expression (prosody).
- Check for understanding of comprehension before, during, and after reading.



HELP AT HOME

- ▶ ■ Have your child read a familiar poem or nursery rhyme to you. Encourage them to read accurately, at a rate that is not too fast or too slow, and with expression. You can model fluency and good expression for your child.
- ▶ ▶ Ask your child to read aloud a paragraph or more from a text they're reading at home or at school. Listen for accuracy, appropriate rate, and expression. If helpful, model reading the paragraph or section.
- ▶ ▶ Try echo reading with your child. You read a sentence, and then your child "echoes" or reads the same sentence.
- ▶ ● Have your child read aloud texts written in English and in their home language, listening for accuracy, appropriate pace, and expression.



Use conventions of standard English when writing or speaking.

- Explain how conjunctions and prepositions work in particular sentences.
- Use verb tense (past, present, future) to communicate times, sequence, and conditions.
- Use correlative conjunctions in sentences.

HELP AT HOME

- ▶ Ask your child to hide an object somewhere in your home, then have your child use prepositions to write directions to find the hidden object.
- ▶ Write each conjunction on an index card and set them on the table with the word side down. Draw a card and work with your child to create a sentence using that conjunction. (For example, I wanted to go to the park, but it started raining; I found my homework, and I turned it in.)

CONJUNCTIONS & PREPOSITIONS

COORDINATING CONJUNCTIONS

and, but, for, or, nor, yet, so

CORRELATING CONJUNCTIONS

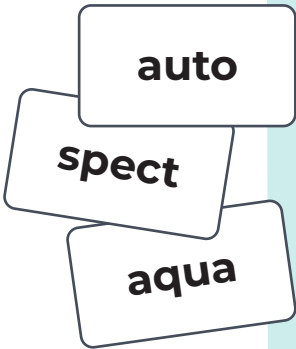
either/or, neither/nor

PREPOSITIONS

above, across, after, around, before, below, beneath, from, in, into, through, over, under

Determine the meaning of unknown and multiple-meaning words or phrases based on Grade 5 texts.

- Use context (the surrounding words and/or sentences) as a clue to the meaning of a word or phrase.
- Use common grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word.



INTERNET RESOURCES



Scan the QR code to view the **ROOT RAP ACTIVITY** from the Florida Center for Reading Research.



HELP AT HOME

- ▶ Provide your child with a wide variety of reading materials on topics they're interested in. Your local public library is a great resource for this.
- ▶ Create a Greek and Latin roots jar filled with Greek or Latin roots and their definitions on index cards. Pull an index card with a Greek or Latin root out of the jar and spend the week searching for as many words as you and your child can find that include that root. Add that list to the back of each index card and use the meaning of the root to decide what the word means. Check your definition with a dictionary.
- ▶ ▲ Use the activity from the Florida Center for Reading Research to help your child gain familiarity with common word roots.

COMMON GREEK & LATIN ROOTS

GREEK

auto (self)
bio (life)
graph (writing)
-logy (study of)

LATIN

aqua (water)
form (shape)
fract (to break)
multi (many)

port (to carry)
scrib/scribe (to write)
spect (to look)
struct (to build)

Your child can accurately quote multiple pieces of evidence from a text when explaining what the text says explicitly and when drawing inferences from the text.

- State multiple pieces of evidence from a text that supports important ideas or messages.
- Summarize the text.
- Explain inferences using examples from a text.

VOCABULARY

An **INFERENCE** is made by using observations and background knowledge to determine a conclusion that makes sense. For example, John hears a smoke alarm and smells burnt bacon when he wakes up. John can infer that his mom burned their breakfast.



HELP AT HOME

- ▶ Give your child sticky notes to jot down thoughts, questions, predictions, inferences, or connections from a text as they read. Stick those notes to the corresponding page in the text and have your child come back to their notes when answering questions about the text.
- ▶ Play “Question Toss”. Ask a question about a text your child has read at home or at school, then toss a soft ball to your child to answer the question. Use the 5Ws and an H (Who? What? When? Where? Why? How?) to start each question. For example, who is the main character? What is the main character’s problem in this text? When does the story take place? Where does the story take place? How do you know?
- ▶ Read the same text as your child is reading. Record your own thoughts, questions, or predictions, then discuss and compare your ideas and reflections with your child’s.

Your child can determine the theme of a story, drama, or poem using details in the text, including how characters in a story or drama respond to challenges or how the speaker in a poem reflects on a topic. Your child can summarize text.

- Describe the most important characters and events in the story.
- Determine how the problem in the story was solved.
- Connect key details in a text to explain how the author, poet, or playwright conveys a theme.



VOCABULARY

A story's **THEME** is its underlying message, or "big idea." For example, the theme of Cinderella is the ability to achieve success through perseverance and positive behavior when faced with negative circumstances.

HELP AT HOME

- ▶ Have your child practice summarizing by allowing them to write a short summary of a fun family activity or an exciting event that can be shared with friends and family members so they can see and respond to it.
- ▶ After reading a literary text, ask your child the following questions: What challenge did the main character(s) face, and how did they overcome it? What did the main character(s) learn or how did they change? What does the author want us to learn from the experience of the main character(s)?
- ▶ After reading a story, ask your child to draw a story board or cartoon strip showing the events, including how the main character was at the beginning of the story and they are at the end.



Your child can compare and contrast two or more characters, settings, or events in a story or drama, drawing on specific details in the text (e.g., how characters interact).

- Compare and contrast characters based on their thoughts, words, actions, decisions, physical attributes, and interactions with others.
- Compare and contrast settings based on the time and place.
- Compare and contrast events based on the characters, actions, or impacts on other events in a story.

HELP AT HOME

- ▶ Read a text with your child. After finishing, discuss each character's thoughts, feelings, actions, goals, or personality. Discuss how each character is the same or different from the other(s).
- ▶ Ask your child to pretend to be one of the characters in a story they are reading at home or for school. Then, interview them based on the details of the story (How did you feel at the beginning of the story? How did you feel at the end? What caused you to change?)
- ▶ Using text messages, have a conversation with your child where they respond to your texts as if they are one of the characters.



BASIC STORY ELEMENTS

Basic story elements include:

- **CHARACTERS:** persons (or even animals) who take part in the action of a short story.
- **SETTING:** the time and place in which a story happens.
- **PLOT:** the series of events that happen in the story.
- **CONFLICT:** the struggle between two people or things; the main character is usually involved in one side of the conflict.
- **THEME:** the central idea or belief in a story.

Your child can determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes.

- Look for elements of figurative language, such as similes and metaphors.

VOCABULARY

SIMILES compare two things using the words “like” or “as” (e.g., the girl sang like a bird.)

METAPHORS compare two things by saying one thing “is” another, different thing (e.g., the hot pavement is a fire under my feet since I am not wearing any shoes).



HELP AT HOME

- ▶ Encourage your child to make notes about unfamiliar words and concepts they come across while reading that can be discussed later with a parent or teacher. Assist them in using a dictionary or an Internet reference tool to look up unfamiliar concepts.
- ▶ Using items or pets inside or around your home, make up similes or metaphors about each one (for example: “Our cat is like a princess” or “Our cat is a princess.”).



Your child can explain how a series of chapters, scenes, or stanzas fit together to provide the overall structure of a particular story, drama, or poem.

- Answer the question: How does the structure of a text impact the reader's experience and understanding of a text?
- Use understanding of text structure to enhance experience with and understanding of text.
- Know that authors use text structures purposefully to create dramatic effect.



HELP AT HOME

- After your child has read a story, drama or poem, have them illustrate and describe each chapter, scene, or stanza. Hang the illustrations and descriptions up to show the order of the text. Once the text is in order, have your child explain the purpose of each section and how it fits with the one before it and the one after it.

COMMON TEXT STRUCTURES

A text's "structure" refers to how a story is built. Common text structures include:

CHRONOLOGICAL ORDER

Explains how things happen in order or in sequence.
Clue Words: first, next, later, then, finally.

COMPARE AND CONTRAST

Explains how two things are similar and different.
Clue Words: both, but, instead, differences, on the other hand.

CAUSE AND EFFECT

The writer wants to explain how one event leads to another.
Clue Words: cause, effect, as a result, consequently, so.

PROBLEM AND SOLUTION

The author wants to explain a problem and show one or more solutions. Clue Words: difficulty, problem, answer, future.

Your child can describe how a narrator's or speaker's point of view influences how events are described.

- Understands that what a narrator/speaker thinks or feels changes how they tell about an event.
- Knows the narrator/speaker in a story tells events from their own point of view
- Knows that events may be described differently, depending on whose point of view a story is being told from.



HELP AT HOME

- ▶ Have your child imagine that a favorite story is told from a different point of view (e.g., what would the story be like if it was told from the villain's point of view?). Discuss how the story would be the same or different with your child.
- ▶ Encourage your child to re-write their favorite story from the point of view of a different character.
- ▶ Ask your child to write a diary entry from a different character's point of view.

POINT OF VIEW

Point of view is the viewpoint from which a story is told.

FIRST-PERSON

The character is telling the story from his/her point of view. Clue Words: I, we.

THIRD-PERSON

A person not involved in the actual story is telling the story, including the thinking and action of all characters. Clue Words: he, she, they.



Your child can analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text (e.g., graphic novel, multimedia presentation of fiction, folktale, myth, poem).

- Identify how the visual presentation of a text supports the author's message.
- Identify the relationship between the tone or beauty of a text and the meaning of the text.
- Understand that the presentation of a text (e.g., visual or multimedia), enhances the reader's understanding of the text.
- Identify multimedia elements, including: text, graphics, sound, video, and animation.
- Identify types of text, such as: graphic novels, multimedia presentations of fiction, folktales, myths, and poems.

HELP AT HOME

- ▶ Take your child to a movie, play or musical based on a written work that they have previously read. Discuss with your child the way the props, music, costumes, and actors' voices and movements bring the story to life. Ask your child to explain how the text would be impacted if the media elements weren't there. What if the pictures weren't here? What if this music wasn't added?
- ▶ ● Take your child to a move, play, or musical in your child's home language. Discuss how the props, music, costumes, and actors' voices and movements bring the story to life.



VOCABULARY

TOPE is the author's attitude toward the writing and the readers (e.g., serious, humorous, suspicious).

Your child can compare and contrast stories in the same genre (e.g., mysteries or adventure stories) on their approaches to similar themes and topics.

- Understands that stories can share the same theme or topic even though the story elements differ.
- Knows that story elements include characters, setting, and plot.
- Knows that genre is writing that has a particular form, content, or technique.
- Recognizes that authors reveal the theme of a story by emphasizing a repeating message through characters and Events in a story.



GENRES

Genre is the word used to describe different types of literature, including but not limited to:

FICTION

- Mystery
- Historical fiction
- Realistic fiction
- Folktales
- Fairy tales

NONFICTION

- Informational texts
- Biography
- Autobiography

VOCABULARY

PROTAGONIST is the main character in a novel.

ANTAGONIST is the villain in the story; opposes the main character (protagonist).

HELP AT HOME

- ▶ One of the best ways to discover a story's underlying theme is to look at how the main character (protagonist) changes during the course of the story or what they learn by the story's end. Often, what this character has learned about life is the idea the writer wants to reveal to the reader. Have your child determine the story's theme and give examples from what happened to the main character as evidence to support the chosen theme.
- ▶ Suggest a variety of literary texts surrounding a common theme (e.g., the Dust Bowl or the Civil Rights Movement) in order to help your child understand how information can be integrated from multiple texts on the same topic, which is a skill they will need for research papers in the future. If you need help finding engaging options, ask your school librarian or your local public librarian.



By the end of the year, your child can read and comprehend literature (including stories, dramas, and poetry) and informational texts (including history/social studies, science, and technical texts) at a fifth-grade level independently and proficiently.

- Have experience with reading stories, drama, poetry, history, science, and technical texts.
- Comprehend grade-level literature, at a proficient level, when they are reading and working independently.

VOCABULARY

An **INFORMATIONAL TEXT** is nonfiction writing, written with the intention of informing/teaching the reader about a topic. Informational texts include magazines, history or science books, autobiographies, newspapers, and instruction manuals.



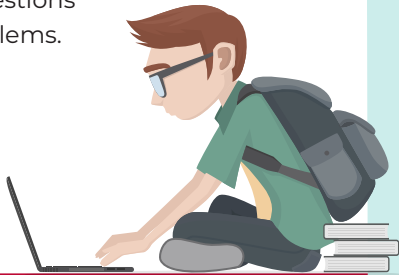
HELP AT HOME

► Encourage your child to read a variety of materials, including stories, poems, plays, books, newspapers, and magazines. Look for opportunities to discuss what your child is reading and find out what they have learned. Interacting with your child about what they are reading will improve their ability to “read between the lines” and make connections between reading and personal experiences.

Visit your school library or public library branch to check out books on a common theme.

Your child can draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.

- Answer questions or solve problems efficiently using informational resources wisely.
- Locate credible, trustworthy, informational text in print and digital formats.
- Know strategies to locate answers to questions and solve problems.



INTERNET RESOURCES



Maryland families can also access a collection of free research databases through the Maryland state library resource center. (Scan the QR code to visit the site.)



Two great options for middle school students are Gale in Context Middle and Gale in Context National Geographic Kids.

HELP AT HOME

- ▶ Use technology to support your child's interest in various topics. Online dictionaries and thesaurus can also help with words your child cannot read or understand independently.
- ▶ Begin teaching your child how to use databases to look up information on topics they're interested in or need for school research. Public libraries offer computer access for Public libraries offer computer access for students who may not have a device at home. Ask your school librarian or your local public librarian which online databases and research tools families can access. They can guide you to reliable resources.

Your child can explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which points.

- Know that authors include details in the form of reasons and evidence, which support and bring validity to particular points in an informational text.
- Identify which evidence supports which points.
- Evaluate and explain the connection between reasons and particular points in a text.

HELP AT HOME

- ▶ Visit your school library or public library and check out informational texts on topics that interest your child, such as ways to save sea turtles, bears, cars, the American Revolution, etc., then ask your child to name the author's main points and how their evidence supports that point. You can access articles on these and other great topics through your school library media specialist or public librarian.

Your child can engage in a variety of discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on each other's ideas and expressing their own ideas clearly.

- Come to formal discussions prepared, having read or studied required or relevant materials.
- Take notes in preparation for the discussion.
- Follow agreed upon rules for discussion and carry out assigned roles (timekeeper, notetaker, etc.).
- Ask questions and respond to others' questions.
- Repeat the key ideas expressed in the discussion.

HELP AT HOME

- ▶ Use "Talk Stems" to have discussions on interesting topics (I think ____ because; I agree with you and ____; Can you say more about ____?; Building on what (Name) said ____; I see things differently. I believe that ____, etc.).
- ▶ ● Use Talk Stems to discuss interesting topics in your child's home language.
- ▶ Decide on simple rules for occasional family discussions (taking turns, taking a turn respectfully, listening to understand), then use those rules when having a family discussion.



Your child can write clear arguments, accurate informative/explanatory texts, and effective narratives appropriate to the task, purpose, and audience.

- Create written arguments that support their opinion (claim) on a topic they have studied, using sound logic (valid reasoning) and facts (relevant evidence) to back up their position.
- Your child can write informative/explanatory texts (or writing pieces) to share complex ideas and information clearly and correctly by choosing, organizing, and analyzing the details they include.
- Your child can write stories (narratives) about things that have really happened or things they have imagined, making sure they use good writing techniques, include descriptive details, and arrange the events in a clear, easy-to-follow order.



HELP AT HOME

- ▶ Create a designated writing space that is quiet and includes a desk, corner, or even a clipboard, where your child can focus on writing.
- ▶ Create a writing “toolkit” that includes pencils, paper, highlighters, sticky notes, and paper.
- ▶ Encourage your child to speak their ideas, tell their stories, and explain their facts before they start writing.
- ▶ Before your child starts writing, have your child state their goal: “What am I trying to tell my reader?”
- ▶ ● Encourage your child to share their ideas for a writing piece in their home language before writing.
- ▶ ● Encourage your child to jot down notes or create mind maps in their home language before drafting.





MATHEMATICS

In fifth grade, your child will solidify their understanding of and fluency with multi-digit multiplication and extend their understanding of division. Your child will apply their understanding of operations to add, subtract, multiply, and divide decimals. Your child will work to develop fluency with addition and subtraction of fractions and develop understanding of multiplication and division of fractions. The concept of volume is also introduced in Grade 5. Some activities will include:

NUMBER AND OPERATION SENSE

- Apply and extend place value understanding to decimals.
- Solve multiplication and division problems.
- Add and subtract fractions with unlike denominators.
- Multiply a fraction or whole number by a fraction.

ALGEBRAIC THINKING

- Interpret, evaluate, and write numerical expressions with grouping symbols.
- Generate and analyze number patterns.

GEOMETRIC REASONING & MEASUREMENT

- Convert measurements within a given measurement system.
- Classify two-dimensional figures based on properties.
- Find volume by measuring and applying formulas.
- Graph and name coordinates in the first quadrant.

REASONING WITH DATA, STATISTICS, AND PROBABILITY

- Collect, organize, and summarize data.



Your child can fluently multiply multi-digit whole numbers. Your child can explain when a strategy or algorithm is most efficient.

- Apply estimation strategies to estimate products.
- Use a variety of strategies to multiply multi-digit numbers (e.g., partial products, doubling and halving, standard algorithm).
- Recognize that the numbers within the problem may make particular strategies or algorithms more efficient for solving.

RESOURCES

PARTIAL PRODUCTS

$$(157 \times 42 = 6,594)$$

$$\begin{array}{r} 157 \\ \times 42 \\ \hline 14 \quad (2 \times 7) \\ 100 \quad (2 \times 50) \\ 200 \quad (2 \times 100) \\ \hline 280 \quad (40 \times 7) \\ 2000 \quad (40 \times 50) \\ + 4000 \quad (40 \times 100) \\ \hline 6,594 \end{array}$$

STANDARD ALGORITHM

$$(416 \times 325 = 135,200)$$

$$\begin{array}{r} 1 \\ 1 \\ 3 \\ 416 \\ \times 325 \\ \hline 2080 \\ 8320 \\ + 124800 \\ \hline 135,200 \end{array}$$

DOUBLING/HALVING

$$(12 \times 624 = 7,488)$$

Think of 12×624
as 6×1248 .

$$6 \times 1248 = 7,488$$

HELP AT HOME

- ▶ Give your child a multiplication problem and ask them to estimate the product, without solving. After estimating, ask your child to use a calculator to determine if their estimate was reasonable. They can make adjustments if needed.
- ▶ ■ Your child may begin by multiplying two-digit numbers. As your child becomes more confident, encourage your child to extend to solving problems within 1,000,000.
- ▶ Use a deck of cards or dice to create multi-digit numbers for your child to multiply. Before solving, ask your child to tell you what strategy they will use and why. Then ask your child to solve it.
- ▶ Ask your child to share their strategy for solving. Your child can share their strategy verbally or in writing.
- ▶ ▲ Ask your child to solve the problem in two different strategies and compare and contrast the strategies.

Your child can read, write, compose, decompose, round, and compare decimals to the thousandths.

- Understand place value positions to the thousandths place.
- Recognize the value of a digit.
- Decimals can be composed and decomposed (broken down) in a variety of ways.
- Understand that rounding involves changing a number to a more friendly number to estimate or make computation easier. Numbers can be rounded to any place value.
- Place value and number lines can be used to compare and order decimals.
- Understand the symbols for comparison greater than ($>$), less than ($<$), and equal to ($=$).

VOCABULARY

STANDARD FORM: 3.54

EXPANDED FORM: $3 + 0.5 + 0.04$

WORD FORM: three and fifty-four hundredths

ADDITIONAL HELP AT HOME

Write down two decimals. Ask your child to use benchmark numbers or a number line to compare. You may ask your child "which is closer to 0?" or "Which is closer to a benchmark number like 0.25 or 1.5?"

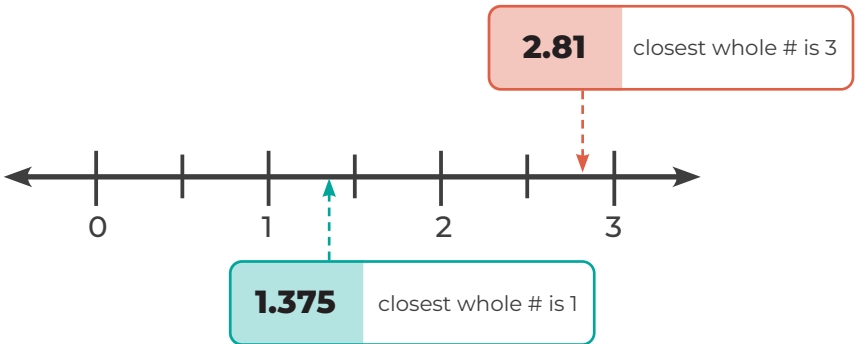
HELP AT HOME

- ▶  Your child may begin working with tenths or hundredths but should extend work to the thousandths.
- ▶ Have your child write the given number in expanded form (e.g., $4.235 = 4 + 0.2 + 0.03 + 0.005$), then write the same number in words (e.g., four and two hundred thirty five thousandths).
- ▶ Given a decimal, ask your child to identify the value of the digits in the decimal (e.g., the 5 in 4.235 represents 5 thousandths or 0.005).
- ▶ Given a decimal, ask your child to find multiple ways to decompose the decimal.
- ▶ Select a decimal and ask your child to round the number to a given place value (e.g., tens, ones, tenths, hundredths, etc.). Encourage your child to explain how they rounded. For example, when rounding 18.917 to the nearest tenth, 18.917 rounds to 18.9 because it is closer to 18.9 than 19.



RESOURCES

NUMBER LINE



PLACE VALUE TABLE

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	.	Tenths	Hundredths	Thousandths
						3	.	4	5	6

Your child can divide whole numbers (up to 4-digit by 2-digit) with and without remainders using a variety of strategies. Your child can explain the computation using arrays, area models, or equations.

- Understand division as sharing an amount into known number of groups or as sharing an amount into groups of known size.
- Apply estimation strategies to estimate quotients.
- Apply understanding of division and division strategies to divide greater numbers.
- Use a variety of strategies to divide (e.g., rectangular arrays, area models, and partial quotients)
- Understand the inverse relationship between multiplication and division and use it to divide.
- Understand remainders and interpret what they mean in the context of a problem.
- Recognize that the numbers within the problem may make particular strategies more efficient for solving.

ADDITIONAL HELP AT HOME

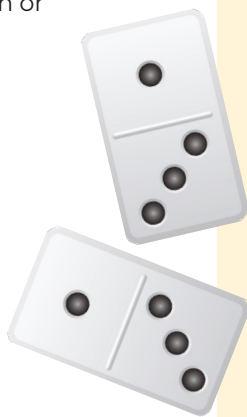
- ▶ Use a deck of cards or dice to create multi-digit numbers for your child to divide. Before solving, ask your child to tell you what strategy they will use and why. Then ask your child to solve it.
- ▶ Ask your child to share their strategy for solving. Your child can share their strategy verbally or in writing.

HELP AT HOME

- ▶ Give your child a division problem and ask them to estimate the quotient, without solving. After estimating, ask your child to use a calculator to determine if their estimate was reasonable. They can adjust if needed.
- ▶  Provide your child with a jar of pennies or counters and a division problem (e.g., $65 \div 5$). Have your child create an array of 65 pennies in rows of 5. Ask, "If you have 65 pennies arranged in groups of 5, how many groups of pennies do you have?" Your child may also draw arrays to represent and solve. Repeat with other equations.
- ▶  Your child may begin by dividing two-digit by 1 digit numbers without remainders. As your child becomes more confident, encourage your child to extend to solving problems up to 4-digit by 2-digit with remainders.
- ▶  Ask your child to solve the problem in two different strategies and compare and contrast the strategies.

Your child can add and subtraction fractions with unlike denominators.

- Estimate sums and differences to assess reasonableness. For example, $\frac{3}{4} + \frac{7}{8}$ will be greater than 1 because both fractions are greater than $\frac{1}{2}$.
- Create equivalent fractions or mixed numbers with like denominators in order to add or subtract.
- Use visual models (e.g., number lines, tape diagrams, drawings, equations) to represent and solve problems involving addition or subtraction of fractions.



HELP AT HOME

- ▶ Give your child an addition or subtraction problem and ask them to estimate the sum or difference, without solving. After estimating, ask your child to use a calculator to determine if their estimate was reasonable. They can adjust if needed.
- ▶ Use dominoes to make fractions. For example, if the domino has 4 dots on one end and 5 dots on the other it will equal $\frac{4}{5}$.

Choose two dominoes to identify 2 fractions and ask your child to add or subtract. Ask your child to use any strategy (e.g., number line, draw a picture, equation) to find the sum or difference. Ask your child to explain their strategy.

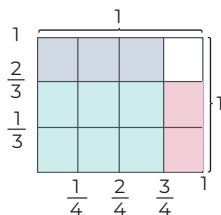
Your child can use a variety of strategies to multiply a fraction or whole number by a fraction.

- Apply and extend understanding of multiplication to multiply fraction or whole number by a fraction and interpret the product.
- Estimate products by reasoning about benchmark numbers (e.g., $\frac{1}{2} \times \frac{3}{4}$ will be less than $\frac{3}{4}$ because I will have one half of $\frac{3}{4}$) and assess reasonableness or answers.
- Use visual models (e.g., area models) and equations to represent and solve problems.
- Apply an understanding of the Distributive Property of Multiplication to solve problems.
- Use multiplication to find the area of a rectangle with fractional side lengths.

RESOURCES

AREA MODELS

$$\frac{2}{3} \times \frac{3}{4} = \frac{6}{12}$$



VOCABULARY

The **DISTRIBUTIVE PROPERTY** lets you find a product by multiplying in parts and then adding the partial products.

$$\frac{1}{2} \times 2\frac{3}{4} = \frac{1}{2} \times (2 + \frac{3}{4}) = (\frac{1}{2} \times 2) + (\frac{1}{2} \times \frac{3}{4}) = 1 + \frac{3}{8} = 1\frac{3}{8}$$

HELP AT HOME

- ▶ Give your child a multiplication problem involving fractions and ask them to estimate the product, without solving. After estimating, ask your child to use a calculator to determine if their estimate was reasonable. They can adjust if needed.
- ▶ Have your child use an area model to multiply fractions.
- ▶ ● Have your child fill a measuring cup $\frac{2}{3}$ full and pour it into a large measuring bowl. Repeat this three times. Then let your child measure to determine how much is in the large bowl. This demonstrates $\frac{2}{3} \times 3 = 2$ cups.
- ▶ Create real-world situations involving fractions for your child to solve (e.g., The baker made 5 cakes. Each cake requires $\frac{1}{4}$ cup of oil. How much oil will the baker use?).

Your child can interpret and evaluate numerical expressions with grouping symbols. Your child can write expressions to record calculations.

- Grouping symbols include parentheses, brackets, and braces.
- Understand the importance of grouping symbols and how they impact the value of an expression.
- Order of operations is the sequence in which mathematical calculation should be performed.
- Connect properties of operations and grouping symbols to write, create, and evaluate numerical expressions.
- Calculations or real-world situations can be represented as a numerical expression.

ORDER OF OPERATIONS

Moving left to right →

GROUPING SYMBOLS

() [] { }

EXPONENTS

x^n

MULTIPLICATION OR DIVISION

$\times \div$

ADDITION OR SUBTRACTION

$+$ $-$

HELP AT HOME

- ▶ Have your child describe a situation where doing things in a certain order is important (e.g., putting socks on before putting on shoes).
- ▶ Write a problem on a card. Then write the same problem on another card with grouping the symbols in a different location. Have your child solve both problems and compare answers and describe why the answers vary.
- ▶ Play a matching game. Write a verbal expression on one card. Have your child match to as many possible numerical expressions as possible (e.g., Write “add 5 and 2, multiply by 7” on a card. It would match with the cards that have these solutions “ $(5 + 2) \times 7$; $7(5 + 2)$; or $7(2 + 5)$ ”).

Your child can generate and analyze number patterns.

- Generate a pattern from a given rule.
- Explain the relationship between numbers within a pattern or between corresponding terms between two patterns.
- Use tables, ordered pairs, and graphs to represent the relationship between quantities.

RESOURCES

INPUT	OUTPUT
4	11
8	15
13	20
21	28

SAMPLE INPUT/OUTPUT TABLE

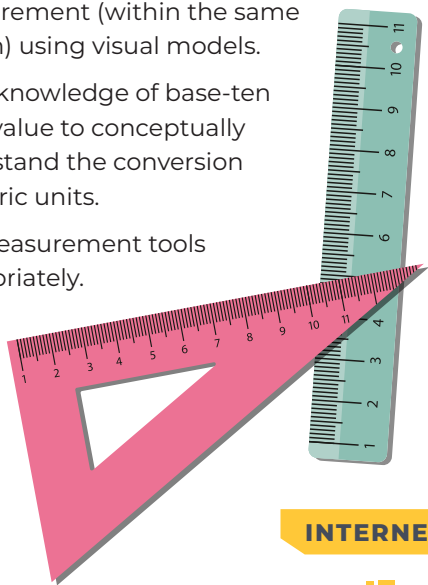
Use input/output tables to help your child determine the rule between two numbers. The rule for this table is “add 7,” therefore, 7 has been added to each input to determine the output.

HELP AT HOME

- ▶ Create an “Input/Output” table. Think of a rule (e.g., add 7), and ask your child to say a number (e.g., 4), which is the input. Reply with the number that follows the rule (e.g., $4 + 7 = 11$), which is the output. Have your child record the input and output in a table. Continue creating inputs and outputs until your child is able to determine the rule.
- ▶ Given a number pattern, ask your child to represent the pattern using a table, ordered pairs (e.g., (x, y)), or graphs. Have your child explain the pattern.
- ▶ ▲ Give your child two patterns presented in tables or in graphs. Ask your child to compare the patterns and explain relationships.

Your child can use the relationship between measurement units to convert measurement units within a given measurement system.

- Use equivalent measurements within a given measurement system.
- Use knowledge of whole numbers, fractions, and decimals to compare/ convert units of measurement within a system.
- Solve multi-step real-world problems using various units of measurement (within the same system) using visual models.
- Apply knowledge of base-ten place value to conceptually understand the conversion of metric units.
- Use measurement tools appropriately.



HELP AT HOME

- ▶ Using a ruler, have your child measure the length of an item. Have your child determine how long it is in centimeters. Then remind your child there are 10 millimeters in each centimeter, so have your child multiply by 10 to determine the number of millimeters long the item is. Point out to your child that the size of the object didn't change, just the units you measured in changed. This is a good time to review $\frac{1}{10}$ of a number.
- ▶ Now have your child do a similar activity with inches and feet. Discuss that these conversions are not based on units of 10.

INTERNET RESOURCE



MCAP RESOURCE

Scan the QR code for the MCAP Grade 5 Math Reference Sheet.



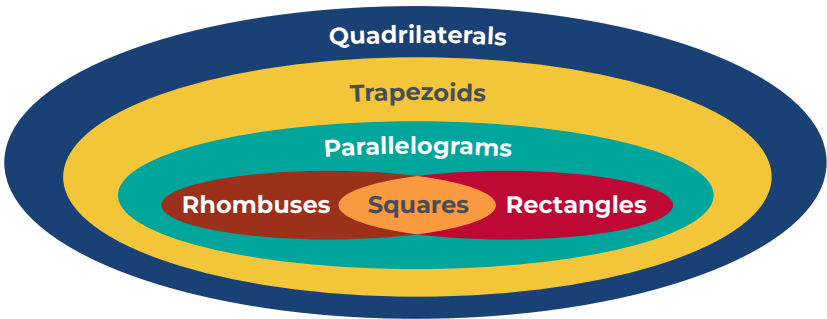
Your child can classify two-dimensional figures based on properties.

- Classify, draw, and name the polygon when given the attributes without a visual picture.
- Explain why squares are unique among quadrilaterals.
- Create a hierarchy of polygons, such as quadrilaterals, sorted with those with the most attributes and narrowing down to those with the fewest attributes.
- Grade 5 students focus on the classification of triangles and quadrilaterals. Triangle should be classified based on angle measures and side lengths. Quadrilaterals should be classified into the hierarchy based on properties. **NOTE:** A trapezoid is a quadrilateral with at least one pair of parallel sides.

HELP AT HOME

- ▶ Play “What am I?” Read off clues (properties) about a polygon. Your child will guess what polygon you are describing.
- ▶ Cut polygons out of paper. Your child will sort the polygons into different groups based on their similar (or same) attributes. Have your child explain their grouping.
- ▶  To support multilingual fifth graders, use home language to discuss vocabulary first then in English to help your child make connections.

HIERARCHY OF QUADRILATERALS

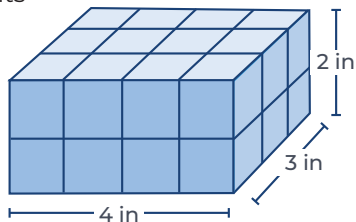


Adapted from Van de Walle, J. A., Karp, K. S., & Bay-Williams, J. M. (2020). Elementary and middle school mathematics: Teaching developmentally (10th ed.). Pearson.



Your child can find volume of rectangular prisms by measuring and applying formulas.

- Volume is measured with cubic units.
- Explain that when finding volume, unit cubes must be packed without gaps or overlaps inside a three-dimensional space.
- Understand the total number of unit cubes (n) packed into a three-dimensional figure equals the volume of the figure.
- Apply the formulas $V = (l)(w)(h)$ and $V = (B)(h)$ for rectangular prisms to find volumes of right rectangular prisms. **NOTE:** B refers to the area of the base.
- Grade 5 students will work with whole number edge lengths.



VOLUME = Length × Width × Height

$$\text{VOLUME} = 4 \text{ in} \times 3 \text{ in} \times 2 \text{ in}$$

$$\text{VOLUME} = 24 \text{ in}^3$$

VOLUME = Base × Height

$$\text{VOLUME} = (4 \text{ in} \times 3 \text{ in}) \times 2 \text{ in}$$

$$\text{VOLUME} = 24 \text{ in}^3$$

ADDITIONAL HELP AT HOME

▲ Have your child measure the length, width, and height of the container in inches. Have your child multiply the length and width to determine the area of the base. Then multiply the height to determine the volume.

HELP AT HOME

- ▶ ■ Have your child compare a square to a cube. Recognize the difference between a two-dimensional and a three-dimensional figure.
- ▶ Look at examples of different sized prisms packed with unit cubes, some packed with no gaps or overlaps and others packed in an unorganized manner, and explain which examples accurately represent the volume of the prism.
- ▶ Draw a rectangular prism and label the dimensions. Ask your child to apply a formula to find the area. Prompt your student to record the volume with cubic units.
- ▶ ● To support multilingual fifth graders, use home language to discuss vocabulary (e.g., volume, length, height, width, etc.) first then in English to help your child make connections.
- ▶ ▲ Ask your child to combine two rectangular prisms and find the total volume.

Your child can graph and name coordinate points in the first quadrant using ordered pairs.

- The coordinate system is a pair of perpendicular lines called axes that intersect at the origin.
- An ordered pair gives the location of a point on the coordinate plane, using x- and y-coordinates. The x-coordinate tells the distance along the x-axis from the origin. The y-coordinate tells the distance along the y-axis from the origin.
- Place a coordinate when given an ordered pair.
- Identify the ordered pair when given a point on the coordinate plane.
- Grade 5 students work in Quadrant I only.



ADDITIONAL HELP AT HOME

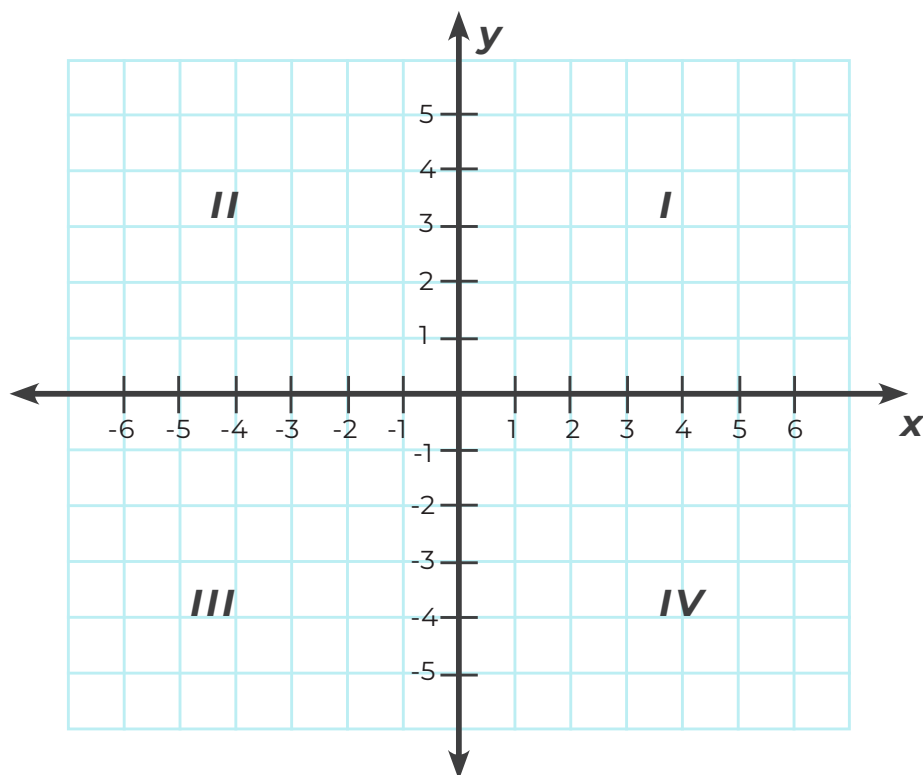
- ▶ Play Battleship.
- ▶ Use home language to discuss vocabulary first then in English to help your child make connections.

HELP AT HOME

- ▶ Give your child a coordinate plane. Ask your child to identify and label the different parts (origin, x-axis, y-axis, quadrant I).
- ▶ Using a coordinate plane and a small object or toy, give your child directions to move within the coordinate plane. Begin using directional language such as move 2 units to the right and move vertically 4 units. As students become more confident, give ordered pairs and ask students to move the object to that location.
- ▶ Using a blank coordinate plane, take turns plotting and identifying the ordered pair for coordinates. Begin by plotting 1 coordinate on the coordinate plane and ask your child to give the ordered pair. Next, your child will plot the coordinate and ask you to give the ordered pair. You can adjust this activity to begin by giving the ordered pair and asking your child to plot it and then switching roles.

RESOURCES

COORDINATE PLANE GRAPH



NOTE: x = x axis and y = y axis. Roman numerals **I**, **II**, **III** and **IV** indicate the quadrants. The origin is the center (where the x axis and y axis meet on this diagram).

Your child can collect, organize, and summarize data using bar graphs and line plots. Your child can analyze data recognizing the importance of context.

- Categorical data refers to data that can be sorted into groups or categories (e.g., transportation to school or favorite recess activity). Categorical data can be displayed using bar graphs or circle graphs. Grade 5 students will use a variety of scales when creating bar graphs.
- Numerical data refers to data that can be counted or measured (e.g., height of plants, temperature). Numerical data can be displayed using line plots or line graphs. Grade 5 students will use line plots with fraction units of halves, fourths, and eighths.
- Graphs are used to organize data and to make interpretation easier.
- Mode, range, and gaps can be identified when summarizing data.
- It is important to consider the context of the data when analyzing the data.
- Adjusting the attributes (e.g., scale, order of bars) can impact how the data is interpreted.
- Grade 5 students are expected to create bar graphs and line plots to represent data. Grade 5 students are expected to analyze and summarize data presented in bar graphs, circle graphs, line plots, line graphs.

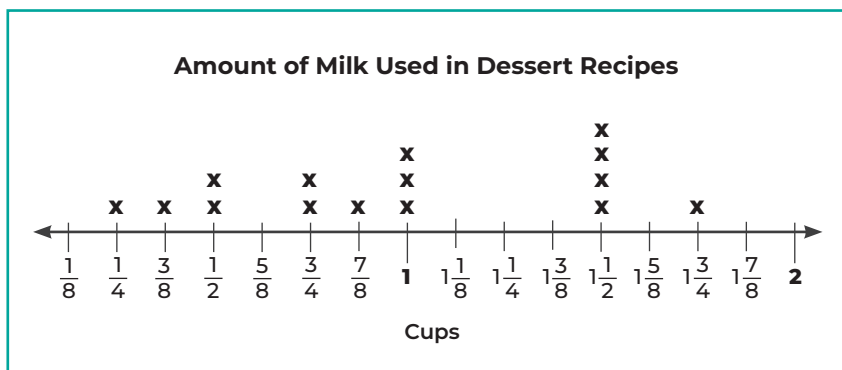
HELP AT HOME

- ▶ Create real-world situations for your child to graph (e.g., favorite movie genre, daily temperatures, amount of minutes spent reading, etc.).
- ▶ ▲ Measure different objects (e.g., heights of family members, height of plants) around the house and plot their lengths using a line plot.
- ▶ After creating bar graphs or line plots, ask your child questions about the data. For example, you may ask “How would you summarize the data?” or “What would happen if the scale on the bar graph was changed?”



RESOURCES

SAMPLE LINE PLOT



MODE is the value within the data set that occurs most often.

MODE is $1\frac{1}{2}$ cups

RANGE shows how spread out the values are within numerical data set.

RANGE is $1\frac{1}{2}$ cups

GAPS refer to missing values or spaces in a numerical data set.

There are missing values at $\frac{1}{8}$, $\frac{5}{8}$, $1\frac{1}{8}$, $1\frac{1}{4}$, $1\frac{3}{8}$, $1\frac{5}{8}$, $1\frac{7}{8}$, and 2 cups.

There is a **GAP** between 1 and $1\frac{1}{2}$.



NOTES



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