A FAMILY GUIDE FOR STUDENT SUCCESS

MISSISSIPPI
DEPARTMENT OF
EDUCATION

Ensuring a bright future for every child

A FAMILY GUIDE FOR STUDENT SUCCESS

3RD GRADE

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The MDE would like to thank the following individuals for their expertise, commitment, and time devoted to the development of this guide.

FAMILY GUIDE FOR STUDENT SUCCESS COMMITTEE

MISSISSIPPI DEPARTMENT OF EDUCATION
Carey M. Wright, Ed.D.,
State Superintendent of Education

STUDENT EXPECTATIONS

Parents are their child's first teachers in life and know their child better than anyone else. Parents have valuable insights into their child's needs, strengths, abilities, and interests. The collaboration of parents and educators is vital in guiding each child toward success. The *Family Guide for Student Success* outlines what your child should learn at each grade level from pre-kindergarten through eighth grade. You can encourage your child's academic growth by reinforcing classroom activities at home. The *Family Guide for Student Success* booklets represent what all students should know and be able to do at the end of each grade level. The achievement of the expectations will help your child meet the assessment standards established by our state. It is only through your support and active participation in your child's education that we form a partnership for success for all the children in Mississippi.

If you have special questions regarding curriculum or school programs, please call your child's school. Do not be afraid to reach out to your child's teacher for additional activities to support mastery of the standards. This guide will help set clear and consistent expectations for your child, build your child's knowledge and skills, and help set high goals for your child.

READING

In third grade, your child will continue to build reading, writing, speaking, and listening skills. He will be exposed to a wide range of texts used for different purposes. Your child will be exposed to, and begin to use, more complex vocabulary. When reading, your child will encounter longer, multisyllabic words to be decoded. Activities in these areas will include:

- Reading stories including fables, folktales, and myths from different cultures, and identifying the lesson or moral of the story.

- Reading informational texts including history, social studies, and science and identifying the main idea.

- Answering questions about characters and how their actions affect events in the story.

- Using details found in the text to support ideas.

- Using illustrations, maps, and photographs to gain understanding.

- Learning and using figurative language.

- Describing similarities and differences of texts.

- Describing the main idea of text and supporting details.

- Describing the order in which events take place in a story.

Your child can look back at the text to ask and answer questions to demonstrate understanding of key details in the text.

- Ask and answer questions before, during, and after reading.

- Ask questions to clarify meaning.

- Visualize key elements within the text.

- Take notes based on reading, with a question in mind.

- Locate the answers to specific questions within the text.

HELP AT HOME

▸ Play "Question Toss." Ask a question then toss a ball to your child. Your child will refer to the text to give the answer to the question. Then, your child will ask a related follow-up question for you to answer and toss the ball back to you. Repeat this process.

▸ Encourage your child to ask questions about everything he is reading to ensure comprehension.
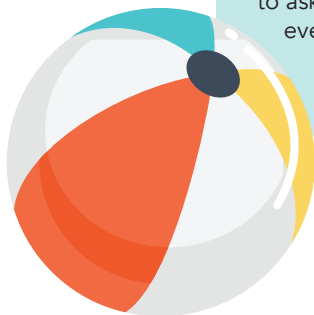
Your child can recount stories, including fables and folktales from diverse cultures, and can determine the central message, lesson, or moral and explain how the author conveyed this in the text.

- Identify the main characters, setting, problem, and solution in retelling a story.

- Make connections to the story based on prior knowledge.

- Identify the main topic of a multi-paragraphed text.

- Demonstrate the ability to understand the main topic one paragraph at a time.

- Locate key details in the text that the author used to support the lesson or moral of the story.

HELP AT HOME

▸ Use a story map to identify character, setting, problem, and solution.

▸ Show a picture to your child and ask him to tell you everything he can about the picture.

RESOURCES

SAMPLE STORY MAP

Using a sheet of notebook paper or construction paper, make a simple story map for your child to complete as he reads a story.

BOOK TITLE: _____ AUTHOR: _____

CHARACTERS

SETTING

PROBLEM

SOLUTION

Your child can describe characters in a story and explain how their actions contributed to the sequence of events in the story.

- Identify the characters in a story.

- Describe a character orally.

- Identify basic story elements as well as major events or challenges within a story.

- Establish a connection that relates to the main topic.

- Use prior knowledge to predict what is coming next in the text.

- Identify the cause and effect, or the problem and solution, of the actions, events, or steps and how they relate to the topic.

- Monitor thinking so that he understands when meaning is lost.

HELP AT HOME

▸ Choose a character from a favorite book or movie and have your child describe his hair color, eye color, face shape, body shape, etc.

▸ Ask your child to explain how the character's decisions or choices changed how things occurred in the story.

▸ Show the front and back of a book and the table of contents. Ask your child to list several possible outcomes for the story.

Your child can determine the meaning of words and phrases as they are used in a text, distinguishing literal from figurative language.

- Understand the difference between the literal meaning or the figurative meaning of a word or phrase.

- Identify the correct meaning of a word or phrase.

VOCABULARY

LITERAL LANGUAGE means exactly what it says, while **FIGURATIVE LANGUAGE** is a word or phrase that does not have its normal everyday, literal meaning. Figurative language is used by the writer for the sake of comparison or dramatic effect.

HELP AT HOME

▸ Choose a book of nursery rhymes or poems to read with your child. Go through the different lines and have your child determine if the author really means what he says (literal language) or if the author actually means something different (figurative language).

▸ Expose your child to several non-literal phrases and have him determine what they mean (e.g., "It's raining cats and dogs" or "I'm as hungry as a horse").

COMMON FORMS OF FIGURATIVE LANGUAGE

Authors use similes, metaphors, hyperboles, personification, and other forms of figurative language to make stories more interesting.

SIMILE
A comparison of two things using the words "like" or "as" (e.g., her cheeks are as red as a rose).

METAPHOR
A comparison of two things without using the words "like" or "as" (e.g., the assignment was a breeze).

HYPERBOLE
An exaggeration that is so dramatic that no one would believe the statement is true (e.g., he was so hungry, he ate the whole cornfield for lunch, stalks and all).

PERSONIFICATION
A figure of speech in which human characteristics are given to an animal or object (e.g., the ocean danced in the moonlight).

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Your child can refer to parts of stories, dramas, and poems when writing or speaking about a text, using terms such as chapter, scene, and stanza. Your child can describe how each successive part builds on earlier sections.

- Use the terms chapter, scene, and stanza when writing or speaking about a text.

- Describe how events in stories, dramas, and poems build upon each other.

HELP AT HOME

▸ Provide your child with a book of poems or nursery rhymes. Read the poems together and have your child read them aloud.

▸ Use a story map to identify the different parts of the story, drama, or poem. Map out the chapters, scenes, or stanzas.

VOCABULARY

A **STANZA** is a group of lines in a poem separated by space from other stanzas, much like a paragraph.

Your child can distinguish his own point of view from that of the narrator or those of the characters.

- State your point of view.

- Describe how your point of view might differ from the narrator or character's point of view.

HELP AT HOME

▸ Read a familiar text with your child and play the role of different characters using different voices and emotions.

▸ Discuss the point of view of the characters you are playing and then have your child tell how the character's point of view may or may not be different from his own.

VOCABULARY

POINT OF VIEW is the way in which the author allows you to "see" and "hear" the text.

The most common points of view are:
FIRST PERSON - A character tells the story.
THIRD PERSON - A narrator, or outsider tells the story.

Your child can explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story.

- Explain how the illustrations support the text.
- Explain how the illustrations in a story help create the mood of the story.

Your child can compare and contrast the themes, settings, and plots of stories written by the same author about the same or similar characters.

- Identify the theme in stories.
- Compare and contrast themes in stories by the same author.
- Compare and contrast settings in stories by the same author.
- Compare and contrast plots in stories by the same author.

VOCABULARY

The **THEME** is the message or lesson that the author wants you to take away from the story. Common themes include, but are not limited to: courage, honesty, love, friendship, hope, and forgiveness.

By the end of the year, your child can read and comprehend literature, including stories, dramas, and poetry, on grade level, independently and proficiently.

- Comprehend grade level text proficiently.

- Read grade level text independently and proficiently.

HELP AT HOME

▸ It is important to read to your child from a variety of different genres. Choose from a variety of books, on grade level and beyond, when you are looking for something to read aloud.

GENRES

Different genres include, but are not limited to:

- fantasy
- realistic fiction
- mystery
- traditional literature
- historical fiction

- science fiction
- informational
- biography
- autobiography
- poetry

Your child can 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.

- Explain how historical events and scientific ideas fit together using words that describe time, sequence, and cause/effect.

- Ask questions while reading about how the author shows the different ideas in the passage work together. Does time affect the ideas? Is the text in a particular sequence? Or is the author trying to explain a cause and effect relationship?

HELP AT HOME

▸ Have your child read nonfiction newspaper or magazine articles. Spend time listing cause/effect relationships and/or the sequence of events of the passage.

VOCABULARY

CAUSE is the reason why something happened. **EFFECT** is the result of what happened.

Your child can determine the meaning of words or phrases in informational text about a specific topic.

- Understand vocabulary pertaining to science topics.

- Understand vocabulary pertaining to social studies topics.

HELP AT HOME

▸ Have your child bring home his science or social studies textbook. Based on the topic he is studying, go through and pick out unfamiliar words and phrases.

▸ Have your child create a bubble map, providing synonyms and antonyms for the unknown words. Then, have your child draw a picture to demonstrate understanding of the word.
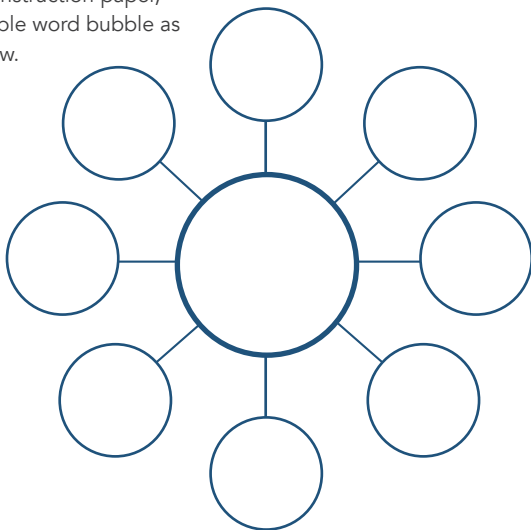
VOCABULARY

INFORMATIONAL TEXT is nonfiction text that provides information. It can include text features such as photographs, captions, table of contents, headings, glossary, etc.

RESOURCES

SAMPLE WORD BUBBLE Using a sheet of notebook paper or construction paper, make a simple word bubble as shown below.

Your child can use text features and search tools to efficiently locate information relevant to a given topic.

- Locate and identify text features (e.g., headings, table of contents, electronic menus, icons, glossaries, captions, bold print, subheadings, indexes, key words, sidebars, hyperlinks).

- Use search tools on a computer to locate information on a topic.

HELP AT HOME

▸ Send your child on a text feature scavenger hunt. Provide your child with a list of text features he has to locate. Provide him with magazines and newspapers. Have your child hunt for the text features in the magazines and newspapers, cut them out, and label them properly.

Your child can 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).

- Use graphics and informational texts to increase understanding.

- Read and understand diagrams, graphs, maps, charts, tables, timelines, pictures, and drawings.

HELP AT HOME

▸ Using your child's science or social studies textbook, explore the different illustrations and text features. Discuss with your child how to read the different maps and graphs. Discuss the information found in all the text features.

Your child can describe the logical connection between particular sentences and paragraphs in a text.

- Use sentences and paragraphs to determine the text structure.

- Ask questions to figure out the structure of the text. Is the author comparing/contrasting, stating cause and effects, writing the sequence of events, or describing something?

HELP AT HOME

▸ Provide your child with different informational texts written in a variety of different text structures. Make note cards with different text structures on them (e.g., description, cause and effect, sequence, compare/contrast). Provide examples of each text structure on the back of the note card.

▸ As your child reads articles and other informational texts, have him match the texts with the different structures on the note cards.

COMMON TEXT STRUCTURES

Text structures are the way in which a text is arranged.

Common text structures include:

DESCRIPTION
Tells or describes a specific thing.

PROBLEM/SOLUTION
States a problem and provides a solution.

CAUSE/EFFECT
Shows why something happened and the result from it.

CHRONOLOGICAL/SEQUENTIAL
Shows events or procedures in time order.

COMPARE/CONTRAST
Shows how two or more things are alike and different.

Your child can compare and contrast the most important points and key details presented in two texts on the same topic.

- Examine two different articles on the same subject.

- Create a Venn diagram to compare and contrast the articles.

HELP AT HOME

▸ Provide your child with two different articles on the same subject. Have your child read the articles and list the similarities and differences between the two articles.

▸ Have your child create a Venn diagram to organize the differences in the articles.

RESOURCES

SAMPLE VENN DIAGRAM
Using a sheet of notebook paper or construction paper, make a simple Venn diagram for your child to complete after he reads two articles.
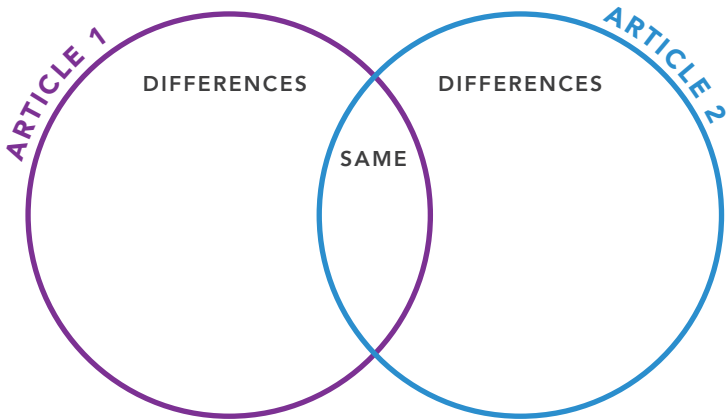
By the end of the year, your child can read and comprehend informational texts, including history/social studies, science, and technical texts, on grade level, independently and proficiently.

- Read informational text on 3rd grade level.

- Read informational text independently and proficiently.
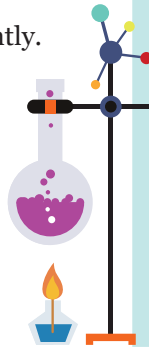
HELP AT HOME

▸ Choose nonfiction books to read aloud with your child (e.g., biographies, autobiographies, books on specific events in history, science experiments, and technical texts). Explore unfamiliar words and phrases together. Write down questions your child has about the topics and research the answers together.

Your child can decode words with common prefixes and suffixes.

- Identify and know the meaning of the most common prefixes and suffixes.

- Understand affixes are added to help add to a word's meaning.

- Identify a base word and then use the affix to help determine the meaning of the word.

COMMON AFFIXES

AFFIXES are added to the beginning or ending of a word to create a new word with a new meaning.

PREFIXES are added to the beginning of the word.

SUFFIXES are added to the end of the word.

HELP AT HOME

▸ Provide your child with a magazine and have him look for and highlight words with prefixes and suffixes. He can read the words to you and check for meaning of the words.

▸ Have your child practice breaking down words with prefixes and suffixes. Encourage your child to ask, "What does this word literally mean?"

PREFIXES	SUFFIXES
Un - not	-ful - full of
Re - again	-less - without
Pre - before	-ly - to do something a certain way
Mis - wrong	-er - more
Dis - not	-est - most

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Your child can decode multi-syllable words.

- Understand every syllable must have a vowel.

- Use strategies to determine the syllables in a word.

- State the syllables and blend the syllables together to form the word.

HELP AT HOME

▸ Make a word list and have your child draw a line to separate the syllables (e.g., helicopter = hel / i / cop / ter).

▸ Have your child circle the vowels in each syllable. This will also help with understanding of spelling.

Your child can read grade appropriate irregularly spelled words.

- Understand that letter-sound correspondence can help determine the spelling of words.

- Know grade level high frequency words.

- Apply spelling sound rules to determine an unknown word.

HELP AT HOME

▸ Print the "Fry Word List" for your child's grade level and write them on index cards. You can play games with these words until your child has memorized them, using five words at a time.

FRY'S THIRD 100-WORD LIST					
LIST 1	high every near add food	between own below country plant	last school father keep tree	never start city earth eyes	light thought head under story
LIST 2	saw left don't few while	along might close something seem	next hard open example begin	life always those both paper	together got group often run
LIST 3	important until children side feet	car mile night walk white	sea began grow took river	four carry state once book	hear stop without second late
LIST 4	miss idea enough eat face	watch far Indian real almost	let above girl sometimes mountains	cut young talk soon list	song being leave family it's

Your child can use context clues to confirm or self-correct word recognition and understanding, rereading as necessary.

- Use context clues to know if what you are reading makes sense.
- Use context clues to know if you are reading words correctly by rereading and self-correcting when needed.

HELP AT HOME

▸ Have your child read an unfamiliar passage. As he reads through the passage, have him highlight every unknown word. Then have your child look up the meaning of each highlighted word and replace the word with a familiar synonym. After replacing the unknown words, have your child reread the passage for better comprehension.

Your child can read grade level text with purpose and understanding.

- Understand grade level vocabulary.
- Predict what a text may be about before reading.
- Check the predictions of text during reading.
- Check for understanding of comprehension before, during, and after reading.

HELP AT HOME

▸ Make a bubble map for your child to write his vocabulary word. He should provide synonyms and antonyms for the word and draw a picture to express understanding.

Your child can read grade level poetry orally with accuracy, appropriate speed, and expression on repeated readings.

- Determine how to read grade level words accurately and repeatedly.

- Read text with fluency and expression.

HELP AT HOME

▸ Have your child read a familiar poem or nursery rhyme to you. Encourage him to read it fluently and with expression. You can model fluency and good expression for your child.

VOCABULARY

FLUENCY is the ability to read words in the text effortlessly and accurately with meaningful expression.

MATHEMATICS

In third grade, your child will develop an understanding of multiplication and division and strategies for multiplication and division within 100. He will expand his knowledge of place value and use this understanding to solve addition and subtraction problems. An understanding of fractions will be developed, especially fractions using 1 as the numerator. Your child will use arrays to solve problems and calculate area. He will also learn more about two-dimensional shapes. Some activities will include:

- Generating measurement data.

- Creating line plots to represent data.

- Using visual fraction models to represent parts of a whole.

- Justifying area by using multiplication.

- Describing and analyzing two-dimensional shapes.

Your child can interpret products of whole numbers (e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each).

- Think in terms of groups of things rather than individual things when multiplying.

- Learn that the multiplication symbol "×" means "groups of" and problems such as 5 × 7 refer to 5 groups of 7.

HELP AT HOME

▸ Arrange pennies into different arrays and have your child write the multiplication fact for the array.

▸ Have your child arrange 4 pennies across the top and 3 pennies going down, which would represent 3 groups of 4, and your child would identify that 3 groups of 4 would represent 3 × 4 = 12.

RESOURCES

SAMPLE ARRAY

Using a sheet of notebook paper or construction paper, make a simple chart your child can use to create arrays for different multiplication facts.

Your child can interpret 56 ÷ 8 as the number of objects in each share when 56 objects are portioned (divided) equally into 8 shares, or as a number of shares when 56 objects are partitioned (divided) into equal shares of 8 objects.

- Answer questions such as, "How many objects will be in each group so that the groups are equal?"

- Answer questions such as, "How many equal groups can you make?"

HELP AT HOME

▸ You and your child can bake cookies and then divide them equally among each other and create a division fact.

▸ Have your child divide 12 cookies equally among 3 people so that every person receives 4 cookies. Your child should then identify that 12 cookies divided among 3 people would represent $12 ÷ 3 = 4$.

▸ Give your child all 12 of the cookies and ask, "If you divide these cookies among 3 people, how many cookies will each person get?"

VOCABULARY

PARTITION MODELS provide students with a total number and the number of groups.

MEASUREMENT MODELS provide students with a total number and the number of objects in each group.

Your child can 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.)

- Use a variety of representations for creating and solving one-step word problems.

- Find the product of the problem, the group size, or the number of groups. Note: The product is the answer to a multiplication problem.

- Use a variety of pictures and letters to represent unknown numbers in the problem.
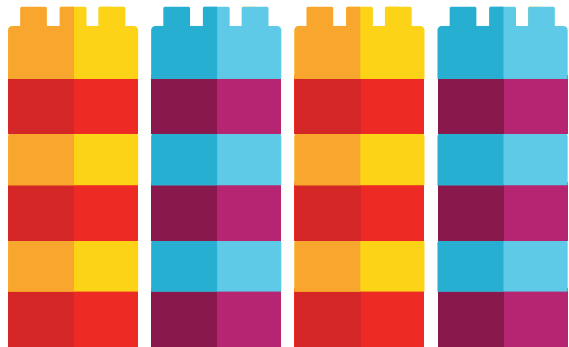
SAMPLE ARRAY OF 24 BLOCKS

Your child can determine the unknown whole number in a multiplication or division equation.

- Solve equations with unknown variables (numbers), such as, $N \times 5 = 20$ or $N \div 5 = 4$.

- Use fact families and knowledge to determine that multiplication is the opposite of division, and to determine missing numbers in equations.

RESOURCES

A **FACT FAMILY** is a collection of related addition and subtraction facts, or multiplication and division facts, made from the same numbers.
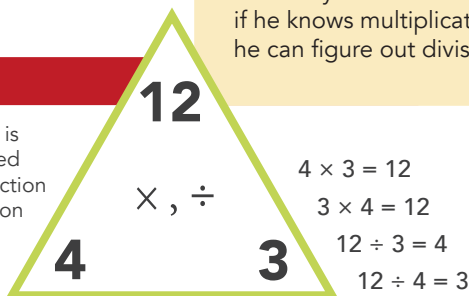
12

$\times$, $\div$

4   **3**

$4 \times 3 = 12$
$3 \times 4 = 12$
$12 \div 3 = 4$
$12 \div 4 = 3$

Your child can apply properties of operations as a strategy to multiply and divide.

- Know the Commutative Property states that the factors of a problem can be multiplied in any order and the product will be the same.

- Know the Associative Property states that the factors can be grouped in different ways and the product will still be the same.

- Know the Distributive Property states that a multiplication fact can be broken up into the sum of two other multiplication facts.

Your child can understand division as an unknown factor problem. For example, he will find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.

- Use the strategy Part + Part = Whole and fact families to solve a division problem.

Your child can fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division or properties of operations. By the end of 3rd grade, your child will know from memory all products of two one-digit numbers.

- Have multiplication and division facts memorized up to 10 × 10 and 100 ÷ 10.

- Practice skip-counting to help better learn math facts.
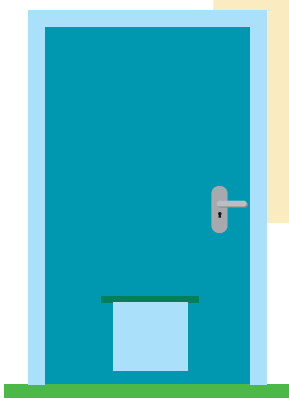
Your child can solve two-step word problems using addition, subtraction, multiplication, and division. Your child can assess the reasonableness of answers using estimation and rounding.

- Recognize a letter represents an unknown number in an equation.

- Recall and use strategies for addition, subtraction, multiplication, and division.

RESOURCES

T-CHART

T-Charts are used to organize information in order to help students solve problems. Below is an example T-chart used to solve a word problem about elapsed time.

Image from http://teacherweb.com/AZ/Pueblodel-Sol/Gojkovich4th/time-T-Chart-method.jpg

HELP AT HOME

▸ After reading a problem, have your child mentally estimate what the answer should be. Have him write the estimate down. After solving the problem, look back at the estimation and discuss if the estimate was close to the answer or determine why the estimate was wrong.

▸ Work on solving multi-step problems one step at a time through the usage of T-Charts to better organize information.

▸ Provide your child with a dry erase marker and a plastic plate. Have your child practice solving the multi-step problems one step at a time on the plate. Talk about the importance of reading the question carefully and marking out unimportant information. Ask questions such as, "What is the problem really asking?" and "What do I already know before I start working?"

Your student can identify patterns in addition and multiplication and explain them using properties of operations.

- Identify patterns in addition by using an addition table.
- Identify patterns in multiplication using a multiplication table.

HELP AT HOME

‣ Practice skip-counting.

‣ Provide your child with a 100 chart. Take a highlighter and highlight a pattern of numbers. Have your child practice identifying the pattern. For example, each highlighted number is increasing by 5.

Your child can use place value understanding to round whole numbers to the nearest 10 or 100.

- Use a number line and a hundred chart to round numbers.
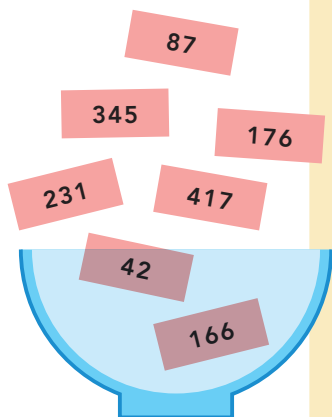
HELP AT HOME

‣ Teach your child the saying, "4 or less, let it rest; 5 or more, up the score." It is a fun way for your child to remember the rounding rules.

‣ Write several numbers ranging from 10 - 500 on small pieces of paper. Fold them up and put them in a bowl. Have your child draw a number from the bowl. Then, have him round the number to the nearest 10 and then the nearest 100 (e.g., 417 rounded to the nearest 10 is 420; to the nearest 100 is 400). Next, you draw a number and complete the task. Repeat until all the numbers have been drawn.

87
345
176
231
417
42
166

Your child can fluently add and subtract within 1000 using different strategies and is able to explain how the answer is reasonable.

- Know that the relationship between addition and subtraction is an inverse relationship.

- Use properties of operations (associative, commutative, and distributive properties) to solve addition and subtraction problems.

- Think about multi-digit numbers as groups of hundreds, tens, and ones.

HELP AT HOME

▸ Play a number cube game! Provide a pair of number cubes (dice). You take one and give your child the other. Have a paper and pencil handy. Roll the cube four times to get a 4-digit number. Then have your child do the same. After creating two 4-digit numbers, you add the numbers together and have your child subtract them. Compare answers. Repeat the game, swapping operations. (Your child will add and you will subtract.)

INTERNET RESOURCES

xtramath.org is a great website for your child to practice becoming fluent in math facts.

Your child can multiply one-digit whole numbers by multiples of 10 in the range 10 - 90 using strategies based on place value and properties of operations.

- Understand place value when multiplying by tens.

- Understand that 50 × 4 is 4 groups of 5 tens or 20 tens, and twenty tens equals 200.

HELP AT HOME

▸ Take your child on a multiplication scavenger hunt. There are numbers all over your house or in the grocery store. Have your child find two numbers and multiply them before being able to find the next set of numbers.
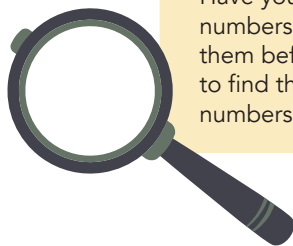
Your child can understand how fractions with a numerator of 1 (e.g., ½, ⅓, ¼) relate to equal parts of a whole number.

- Fractions must have equal parts.
- Know that fractions can show equal parts of a whole and parts of a set.
- Know that when a whole is cut into equal parts, the denominator represents the number of equal parts.
- Know the numerator of a fraction is the count of the number of equal parts that are shaded or different from the other parts.

HELP AT HOME

▸ Pizza Time! Cook a pizza with your child. After cutting the pizza, talk about what fraction of the pizza is there. As each piece is eaten, have your child identify the fraction of pizza that remains.
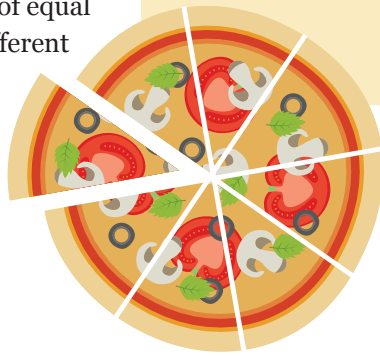
Your child can compare equal fractions (e.g., ½ and ²/₄) using number lines or visual models.

- Compare fractions by looking at the size of the parts and the number of the parts (e.g., 1/9 is smaller than 1/3 because when one whole is cut into 9 pieces, the pieces are much smaller than when one whole is cut into 3 pieces).

VOCABULARY

EQUIVALENT FRACTIONS are fractions which have the same value, even though they may look different (e.g., ½ and ²/₄ are equivalent, because they are both "half").

HELP AT HOME

▸ Draw visual representations of fractions on index cards and then draw a matching equivalent fraction on another index card. Scatter the index cards on the floor in front of your child and have him sort the cards, matching up the equivalent fractions (e.g., ½ would match up with ²/₄).

Your child can tell and write time to the nearest minute. Solve word problems involving addition and subtraction of time intervals in minutes.

- Know that elapsed time is the interval of time, given a specific unit, from a starting time to an ending time.

- Know that 60 minutes is equivalent to one hour.

HELP AT HOME

▸ Encourage your child to tell time. Ask your child, "What time is it?" using an analog clock. Then ask questions such as, "What time is it now? What time will it be in 5 minutes?"

▸ Label your wall clock with sticky notes, marking each 5-minute increment. For example, when the long hand is pointing to the 3, the sticky note would say 15.

Your child can solve problems by measuring an object's mass and liquid volume.

- Measure objects using grams, kilograms, and liters.

- Solve word problems about mass and volume.

HELP AT HOME

▸ Provide your child with different sized containers (e.g., 2 liter bottles, milk jugs, glasses). Have your child fill the containers with water and compare the amount the different containers hold.

▸ Have your child look at containers of unknown capacity and estimate how much liquid they will hold. Have your child fill the containers and then empty them into a measuring cup to calculate the container's capacity.

A FAMILY GUIDE FOR STUDENT SUCCESS

Your child can use picture and bar graphs to illustrate measurement data.
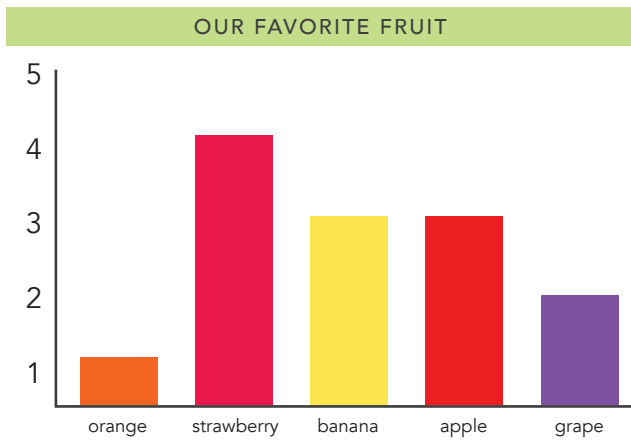
- Correctly draw a picture graph.
- Correctly draw a scaled bar graph.
- Answer questions based on information from graphs.

RESOURCES

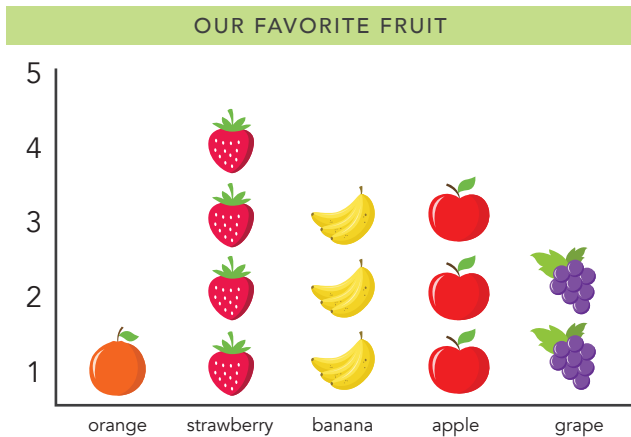**SAMPLE BAR GRAPH**

OUR FAVORITE FRUIT

SAMPLE PICTURE GRAPH

OUR FAVORITE FRUIT

Your child can generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Your child can show the data by making a line plot.

- Use a ruler to measure to the nearest inch, ½ inch, and ¼ inch.

Your child can find the area of shapes using and understanding square units.

- Understand that a unit square can be used to find the area of a plane figure.

- Find area through multiplication by using the formula Area = Length × Width.
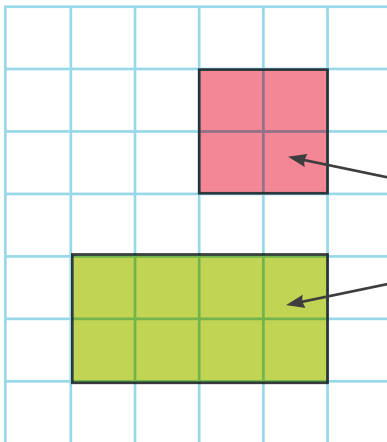
4 square units

Length × Width = AREA
4 x 2 = 8 square units

Your child can solve real-world and mathematical problems involving perimeters of polygons.

- Find the perimeter of polygons when side lengths are given.

- Find the perimeter by using the formula Perimeter = Side + Side + Side + Side.

- Find the perimeter of polygons when one side length is unknown.

HELP AT HOME

▸ Using straws cut into lengths of 2, 4, and 6 inches, along with pipe cleaners cut into 2-inch pieces, your child can explore perimeter by making polygons with sides of various lengths. Have your child measure and record the lengths of his polygons, and then draw the shapes on paper.

Your child can recognize that rhombuses, rectangles, and squares are examples of quadrilaterals; and can draw examples of quadrilaterals that do not belong to any of these subcategories.

- Understand that a quadrilateral is a closed shape with four sides (e.g., square, rectangle, trapezoid, parallelogram, rhombus).

- Understand that a parallelogram includes: squares, rectangles, rhombi, or other shapes that have two pairs of parallel sides.

- Sort shapes based on their characteristics or attributes.

- Draw shapes.

HELP AT HOME

▸ Make a paper copy of each quadrilateral. Hold up each shape and have your child describe all of the attributes of the shape. Ask your child questions such as: How many sides does the shape have? Does the shape have any parallel lines or perpendicular lines? Are the sides of the shape the same length or different?

VOCABULARY

PARALLEL LINES are lines that run side by side but never touch.
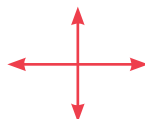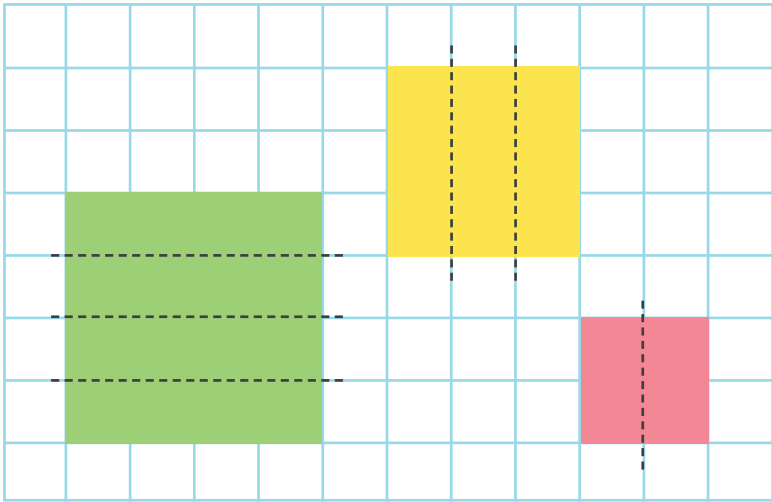
PERPENDICULAR LINES are lines that intersect to form four right angles.

Your child can relate fractions to shapes as he divides a whole into equal parts.

- Divide a shape into equal fractional parts.

- Understand that each fractional part has the same area.

PROPERTIES OF OPERATIONS

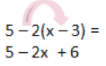Below is a table describing the Associative, Commutative, and Distributive Properties.

Name	Hints	Example	Notes
Associative "Grouping"	You "associate" with different groups.	5 + (15 + 4) = (5 + 15) + 4	Works with addition and multiplication, not subtraction or division.
Commutative "Ordering"	Since Commutative has an "o" in it, think "order".	5 + 4 + 3 = 4 + 3 + 5	Works with addition and multiplication, not subtraction or division.
Distributive "Distributing or Pushing Through Parentheses"	Think of "distributing" something to your friends.	$5 \times (3 + 4) =$ $5 \times 3 + 5 \times 4 =$ $15 + 20 = 35$ $5 - 2(x - 3) =$ $5 - 2x + 6$ $5x + 7x =$ $(5 + 7)x = 12x$	When negatives are on the outside of the parenthesis, make sure you distribute the negatives to second number, too. Remember that multiplying two negatives results in a positive.

Image from http://www.shelovesmath.com/algebra/beginning-algebra/numbers-properties-and-notation-in-algebra/

A **POLYGON** is a simple closed shape made up of straight line segments only. Polygons are classified according to the number of sides they have.

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INTERVENTION SPECIALIST

Bobby L. Richardson, M.Ed.
INTERVENTION SPECIALIST

Laurie Weathersby, M.Ed., CALT, LDT
INTERVENTION SPECIALIST

Content Specialists

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DIRECTOR OF SECONDARY CURRICULUM
AND INSTRUCTION

Dana Danis, M.Ed.
ENGLISH LANGUAGE ARTS SPECIALIST

Alicia Deaver, M.S., CCLS
EARLY LEARNING COLLABORATIVE COORDINATOR

Mississippi Department of Education
359 North West Street
P. O. Box 771, Suite 203
Jackson, Mississippi 39205-0771
(601) 359-3511
www.mdek12.org/ESE