

## **Math**

### **What math concepts will my second-grader learn?**

Your child becomes a master of addition and subtraction skills that she began learning in first grade. You can expect your second-grader to focus on understanding number relationships in addition and subtraction — first, using physical objects like rods or blocks and later with paper and pencil. She also starts making the move to mental math, if she hasn't already, and can do simple problems in her head.

### **Money, telling time, and number value**

Second-graders continue their work with money, time, and number values from previous grades. Your child adds and subtracts money using a decimal point, solving equations such as  $\$1.25 + \$.20 = \$1.45$ .

Your child works on telling time to the quarter-hour using an analog and a digital clock.

He learns about place value in a three-digit number. For example, he figures out that 879 is eight 100s, seven 10s, and nine ones. He compares whole numbers using the words *greater than*, *less than*, or *equal to* and the symbols  $>$ ,  $<$ , or  $=$ .

### **Controversy over calculators**

How much should elementary school students use calculators? The question has been debated by math teachers, university professors, and parents. There is general agreement that they should not be used as a substitute for learning basic arithmetic skills. Talk to your child's teacher about how calculators are used in the classroom.

### **What should my second-grader be able to do by the end of the year?**

Count, read, and write whole numbers up to 1,000

Know from memory addition and subtraction facts for sums up to 18

Add and subtract two- and three-digit numbers that require regrouping

Tell time and the relationships of time, such as days in a month and hours in a day

### **What to look for when you visit**

Graphs on display, pictures of geometric shapes, and number lines used to practice addition and subtraction

Tiles, rods, blocks, or other objects used for counting and sorting

Measuring devices such as rulers, scales, and thermometers

Time set aside for pencil-and-paper practice with numbers

Lessons in problem solving throughout the day ("If 15 of you are buying milk for lunch, and 10 are buying juice, how many more students are getting milk?")

### **By the end of the year, you can expect your child to:**

1. Begin to reason and concentrate
2. Improve his ability to process information
3. Work cooperatively with a partner or small group

4. Understand the difference between right and wrong
5. Make connections between concepts so he will be better able to compare and contrast ideas
6. Expand his vocabulary
7. Read fluently with expression
8. Recognize most irregularly spelled words such as *because* and *upon*
9. Begin to use a dictionary
10. Add single- and multi-digit numbers with regrouping
11. Tell time to the quarter-hour
12. Know the concept of multiplication (for example,  $2 \times 3$  is two rows of three)

## **Reading**

### **Building fluency and meaning**

Your second-grader is becoming a more fluent reader and reading more for meaning. She should have many opportunities to read - silently on her own, aloud in groups, aloud with a partner - and listen to books read aloud. She rereads stories to increase her fluency, reading quickly and accurately with expression.

### **Decoding words**

Your second-grader is able to recognize a growing number of words, using his knowledge of word structures and letter-sound relationships. He uses a variety of strategies to read. He not only uses skills to hear and say separate sounds in words, but also uses patterns to decode words. He can read new words by breaking them into syllables. He is learning the meaning of many prefixes and suffixes to read and understand words.

### **Reading chapter books**

Your second-grader is reading more complex material. She is learning to read across subject areas, including social studies, science and math. She is reading books that have several chapters and beginning to develop a larger vocabulary by reading a variety of books. She is taught specific words from selections she reads in class.

In second grade, your child is able to use the parts of a book to find information. She can identify the table of contents, index, glossary, title page, introduction and preface. She understands that there are different purposes for reading: for pleasure, to get directions and to gather information. She is able to select books at her reading level that interest her.

Reading specialist Jennifer Thompson recommends using the "five-finger test" to choose a book at the appropriate reading level: "Have your child open the book to any page and if she finds five words that she does not know; the book is too difficult."

## **Doing research**

Second-graders learn to use books to research different subjects and answer questions about a topic. They use encyclopedias, informational books and the Internet to do research and locate information. "Reading informational text is critical for second- and third-graders," says Thompson. "Most of the federally mandated tests contain a great deal of nonfiction reading. Children need to learn to read nonfiction for understanding and need to be taught how to use all of the conventions of nonfiction to assist with understanding. These include the table of contents, index, glossary, captions, illustrations, bold print, diagrams, charts and graphs."

## **Reading aloud**

Second-graders should still get many opportunities to listen to books read aloud. Listening to a teacher or parent read provides a model of fluent reading and fosters a love of books. It also helps your child understand vocabulary and language patterns in texts. Books read aloud are often discussed before, during and after the reading to increase involvement and understanding. Your second-grader should also have many opportunities to practice reading with fluency by reading aloud himself. He also reads aloud in groups and with a partner.

## **Reading for meaning**

Your second-grader is learning strategies to draw meaning from what is read. She will recognize the sequence of events in a story and their cause and effect, as well as anticipate the possible outcome. She can retell familiar stories, summarizing the main ideas and plot, and identifying the characters and settings. She is asked to compare and contrast characters in stories to her own life and to characters in other stories she has read. She asks and can answer questions about the text, such as who, what, when, where, why and how.

She is learning to use the illustrations, text and her prior knowledge to make predictions and grasp the meaning of the story. She can use prefixes, suffixes and roots to determine the meaning of a word. She is also learning to use a dictionary and thesaurus to discover the meanings of words.

## **Using graphic organizers**

Your second-grader is likely to be using diagrams or pictures to organize and show understanding of the information she has read. She may fill in a "story map," identifying the characters, events and main idea of a story. A Venn diagram, made up of two overlapping circles, may be used to compare similarities and differences in characters and stories. Thompson explains: "Graphic organizers are a great tool to use before, during and after reading. They give students continued opportunities for dynamic interaction with text!"

## Shared reading

Your second-grader may take part in shared reading, an interactive reading experience guided by his teacher. During the reading, the teacher demonstrates strategies students can use to read and understand a story. The teacher may pause in the reading to teach vocabulary, introduce a reading skill or encourage the students to predict what will happen next. The book is typically read multiple times over several days. "Shared reading is a technique that is often used to develop fluency. It offers students positive guidance and support in a social context," Thompson notes.

## Guided reading

Your child may take part in guided reading, a practice in which the teacher interacts with small groups of students as they read books. The teacher introduces reading strategies, tailoring the instruction to the needs of the students. As students read, the teacher provides support as needed.

### **By the end of second grade you can expect your child to do the following:**

Read silently for an increased period of time and use reading to research topics

Read fluently with expression

Self-correct when reading

Read words of one, two or more syllables automatically

Recognize most irregularly spelled words such as *said* and *where*

Use strategies more efficiently such as rereading, questioning and making connections when comprehension breaks down

Use word identification strategies to unlock the meaning of unknown words (chunking familiar parts, prefixes and suffixes)

Use knowledge of antonyms and synonyms

Identify the problem and solution of a story

Use a table of contents and an index

Use pictures and charts to gain meaning from text

### **What to Look for When You Visit**

**Decodable books**, which have the phonics elements and high-frequency words that your child has been taught in class

**Leveled books**, which are books organized in levels of difficulty from the easy ones for a beginning reader to longer, more complex books for advanced readers. The leveling of texts allows teachers to match books with an individual student's reading ability.

**A reading area** with a class library of books and a place for students to sit comfortably and read

**A listening center** with a tape recorder, earphones, tapes of stories and multiple copies of the accompanying text provides a model for fluent reading.

**A word wall**, which is a list of words displayed in alphabetical order on a bulletin board, used for reference and to reinforce vocabulary words

### **What will my second-grader learn about writing?**

Second-graders write daily for various purposes. They write responses to literature, journal entries, answers to math word problems, poetry, letters, social studies reports

and creative stories. Your child develops more independence as a writer and learns to express her ideas creatively and effectively. Her reports and narrative stories include characters; setting; a problem and solution; and events written in order with a clear beginning, middle and end. She writes stories from her viewpoint as well as in the third person (he, she, it, they). She begins learning how to write a paragraph with a topic sentence and supporting details. Your second-grader continues to expand on the writing process introduced in first grade, using these steps:

Discussing ideas before writing  
Prewriting  
Drafting  
Revising  
Editing  
Publishing  
Sharing

This process helps your child with the organization and thinking required to write a story. Your child becomes more aware of the audience he is writing for and the goal of writing. He begins to understand the purposes of different genres. For example, a report's purpose is to inform and a narrative's is to entertain or share a story. To reinforce this at home, you can discuss different purposes of writing as you encounter them, such as those for recipes, letters and programs for concerts or plays.

### **What will my second-grader learn about spelling?**

In second grade, spelling is reinforced through the larger context of reading and writing. Second-graders continue to learn common spelling patterns and recognize frequently used words in their reading.

### **Weekly spelling lists**

Typically, second-graders bring home weekly spelling lists they will be tested on. These lists may be from a prescribed spelling program or chosen by the teacher. They may include word families, or groups of words that have a common feature or pattern. For example, words with a long *e* that is spelled *ea, ee* or *ie*. The lists may also have "challenge words," which are more difficult to spell, or thematic words that are used around the holidays or in specific subject areas. Second-graders usually do activities with the spelling words, such as writing a sentence using each word to understand its meaning and reading stories that include the terms.

"To reinforce what your child is learning at school," suggests Karen Heath, our consulting teacher and the 2005 Vermont Teacher of the Year, "find out what spelling program is being used in the classroom. If there is no weekly list, ask the teacher for lists of word families to work on each week."

### **Invented spelling**

In second grade your child may still use [invented spelling](#) (also called inventive spelling), or spelling words as they sound, for difficult words. But she will also use many

conventional spellings. When children use invented spelling, they are demonstrating their knowledge of the sounds letters make and of spelling patterns. Research shows that letting children use invented spelling allows them to focus on the purpose of writing: communication. As they learn the rules of spelling, they begin to apply them and make the transition to conventional spelling.

### **Using a dictionary**

Second-graders learn to use a dictionary to find the correct spelling of words. They may also have personal spelling dictionaries in which they enter words they are learning to spell. By the end of second grade, your child will have learned to spell:

Words with short and long vowel sounds, such as *bread* and *dough*

Words with *r* after a vowel, such as *turn*

Words with consonant blend patterns, such as the *cl* blend in *clay* and *clam*

Frequently used words such as *was*, *were*, *says* and *which*

Words in which the consonant is doubled when the tense changes, such as *stop* becoming *stopped* and *stopping*

Words that drop the final *e* when adding an ending, such as *use* becoming *usable*

Words in which the *y* changes to *i* when adding an ending, such as *easy* becoming *easily*

### **What will my second-grader learn about handwriting?**

In second grade, students continue to learn the proper strokes and posture needed for correct handwriting. There is usually a time allotted every day for them to practice writing each letter. They often practice in handwriting workbooks. At the end of second grade, they may begin to learn cursive writing.

### **What to Look for When You Visit**

An alphabet chart prominently displayed in the classroom

Handwriting workbooks

An individual alphabet chart (perhaps taped to the child's desk or in a folder) for easy reference

"Word walls" - lists of words displayed in alphabetic order on a bulletin board that are used for reference and to reinforce vocabulary words and "sight words," or terms frequently used in reading and writing

Spelling games and puzzles

Journals

Examples of student writing displayed around the classroom

Students writing individually, with a partner and in groups

An array of writing tools such as markers, crayons, pens, charts, cards, fancy paper and stationery

Lots of print materials for easy reference

Charts made by the teacher on topics the class has been learning