

# Welcome to FOURTH GRADE!

The Commonwealth of Massachusetts sets expectations, or standards, for what every student will know and be able to do in school. This guide is designed to help you understand those standards and partner with teachers to support your child's learning during fourth grade. If you have questions about this information or your child needs extra help, please talk to your child's teacher.

## To talk to your child about school, you can ask:

- ▶ Can you tell me about something you **read** today?
- ▶ How could you use the **math** you learned today?
- ▶ What **scientific ideas** did you talk about today?
- ▶ How did someone help you learn today?

## If your child is also learning English, you can ask:

- ▶ How does your teacher help you understand and participate in class?
- ▶ How do you work on your English while you learn academic material?



## TO LEARN ENGLISH LANGUAGE ARTS AND LITERACY at every grade, your child will:

- ▶ Read various texts, like books, poems, letters, news articles, and Internet pages.
- ▶ Speak and listen in formal and informal ways, like presentations and conversations.
- ▶ Communicate opinions, information, and experiences in writing for various readers.
- ▶ Use knowledge of English grammar and vocabulary in both speech and writing.



## TO LEARN MATHEMATICS at every grade, your child will:

- ▶ Use math to represent and solve real-world problems.
- ▶ Use math to make arguments about why something is true or false.
- ▶ Use tools, like rulers and calculators, to show mathematical relationships.
- ▶ Use patterns and the structures of numbers to think about math.



## TO LEARN SCIENCE AND TECHNOLOGY/ENGINEERING at every grade, your child will:

- ▶ Ask scientific questions about the natural world and things humans design.
- ▶ Learn through various experiences, like observations and experiments.
- ▶ Solve problems using the skills and tools of engineers and scientists.
- ▶ Share solutions and communicate explanations of how the world works.

The next three pages focus more specifically on the Massachusetts learning standards for **FOURTH GRADE**.



## NEW EXPECTATIONS FOR FOURTH GRADE:

- ▶ Compare and contrast stories from different cultures and stories told from different points of view: for example, first-person and third-person.
- ▶ Explain the meaning of figurative language (like metaphors and similes) in speech and writing: for example, *the homework was a breeze* or *the lake was as pretty as a picture*.
- ▶ Choose precise words when speaking, writing, or editing writing, including words related to academic subjects: for example, *renewable energy* from science.
- ▶ Understand when it is important to speak more formal English (like when giving class presentations) and when more informal English is appropriate.



## BY THE END OF FOURTH GRADE, STUDENTS CAN:



- ▶ Read aloud smoothly, paying attention to punctuation marks. For example, pause between sentences; and sound excited at an exclamation point (!).
- ▶ Use words like *chapter*, *stanza*, and *scene* to explain how poems and plays are different from prose (like stories and articles).
- ▶ Use graphs, charts, timelines, and other visual displays to help understand what they are reading.
- ▶ At the end of a class discussion, review the ideas and information people shared.
- ▶ Provide a list of sources they used when doing research.
- ▶ Use technology to find information and work with other people.
- ▶ Type at least one page at a time on a computer.
- ▶ Use easily confused words (like *there*, *their*, and *they're*) correctly.
- ▶ Make visual patterns when writing poems: for example, group lines into verses.
- ▶ Write their given names (first names) in cursive.

## QUESTIONS YOU CAN ASK YOUR CHILD:

- ▶ What kinds of things do you like to read? Why?
- ▶ What are you writing in school this week?
- ▶ What new words or phrases did you use in school today?



## TOPICS YOU CAN DISCUSS WITH YOUR CHILD'S TEACHER:

- ▶ Topics your child enjoys researching
- ▶ How your child participates in class discussions
- ▶ Online resources that can help your child learn



## FOCUS AREAS FOR FOURTH GRADE:

- ▶ Solve multi-step word problems using multiplication, division, addition, and subtraction. For example, find the total area of two rooms.
- ▶ Understand that multiplication and division can be used to compare quantities. For example, explain that a rubber band can stretch to *three times* its usual length.
- ▶ Understand and use equivalent fractions (like  $\frac{1}{2}$  and  $\frac{3}{6}$ , which are the same) and unit fractions (like  $\frac{1}{3}$  or  $\frac{1}{5}$ , with a 1 on top).
- ▶ Describe, analyze, compare, and classify shapes using types of lines and angles. For example, compare the types of angles in two triangles.



## BY THE END OF FOURTH GRADE, STUDENTS CAN:



- ▶ Know multiplication facts up to  $12 \times 12 = 144$  and their related division facts (like  $144 \div 12 = 12$ ).
- ▶ Multiply and divide multi-digit whole numbers (like 536 and 23) using various strategies.
- ▶ Fluently (quickly and correctly) add and subtract numbers up to 1,000,000 using the standard algorithm.
- ▶ Add and subtract fractions and mixed numbers (like  $4\frac{2}{5}$ ) with the same denominator (number on the bottom).
- ▶ Multiply fractions by whole numbers: for example,  $\frac{1}{4} \times 5$ .
- ▶ Understand how decimals and fractions are related: for example,  $0.63 = \frac{63}{100}$ .
- ▶ Convert larger measurement units (like *miles*, *hours*, or *liters*) to smaller units (like *feet*, *minutes*, or *milliliters*).
- ▶ Use formulas (like *length*  $\times$  *width*) for the area and perimeter of rectangles.
- ▶ Use a protractor to measure and draw angles.

## QUESTIONS YOU CAN ASK YOUR CHILD:



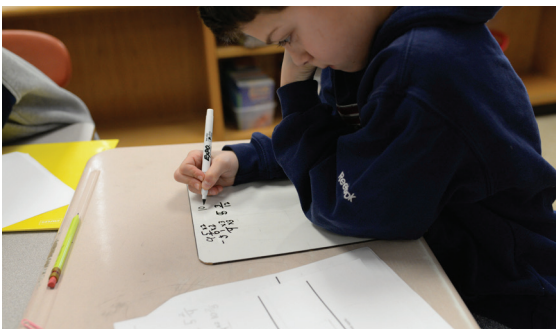
- ▶ How many times older am I than you?
- ▶ We need half a cup of milk for this cake. How many times should we fill the  $\frac{1}{4}$ -cup measure with milk?

## TOPICS YOU CAN DISCUSS WITH YOUR CHILD'S TEACHER:



- ▶ Which multiplication and division strategies work best for your child
- ▶ Activities to do at home that use fractions (like baking)

# MATHEMATICS





## FOCUS AREAS FOR FOURTH GRADE:

- ▶ Understand how weathering and erosion (like blowing wind, flowing water, and moving ice) can break and move rocks and other things.
- ▶ Understand how the different parts of plants (like seeds, leaves, roots, and fruit) and animals (like bones, legs, ears, and eyes) help them grow and survive.
- ▶ Understand how energy moves and changes. Observe energy as light, sound, electricity, or heat: for example, the electrical energy that lights up a bulb when a wire is attached to a battery.
- ▶ Try out the design process like an engineer: for example, plan, develop, test, and improve products to solve specific problems.



## BY THE END OF FOURTH GRADE, STUDENTS CAN:



- ▶ Explain how renewable energy sources (like sun, water, and wind) are different from non-renewable ones (like coal, oil, and nuclear power).
- ▶ Use evidence to show how erosion has changed the local landscape over time
- ▶ Use maps of Earth's continents and oceans to analyze where volcanoes, earthquakes, and mountain ranges form.
- ▶ Compare different ways of protecting people and things from events like floods and blizzards.
- ▶ Explain how energy and the speed of objects are connected. Predict what will happen when two objects run into each other.
- ▶ Show how wave patterns carry energy and can cause objects to move.
- ▶ Compare ways of communicating using patterns, like Morse code.
- ▶ Design a solution to a problem. Test it to see how well it works. Use the test results to improve the design.

## QUESTIONS YOU CAN ASK YOUR CHILD:

- ▶ What are some ways to make sure a flooding river does not damage roads and bridges?
- ▶ How do our eyes allow us to see the world around us?



## TOPICS YOU CAN DISCUSS WITH YOUR CHILD'S TEACHER:

- ▶ Ways of applying what your child learns in science to everyday situations
- ▶ Places in the community that can help your child learn science

