

# PREPARING STUDENTS FOR SUCCESS IN

## GRADE 8

### Your Child's Progress

*A parent resource for understanding what your child should learn and be able to do this year, and helpful suggestions for supporting your child's learning at home.*



CONNECTICUT STATE  
DEPARTMENT OF EDUCATION



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**W**e owe it to our kids to make sure that they receive an education that prepares them to thrive in a global economy and civic life. That is why Connecticut raised the bar and issued an instructional roadmap that will prepare our kids for college and careers.

Our roadmap, the Connecticut Core Standards, sets learning expectations for what students should learn and be able to do at each grade level so that by the time they graduate from high school, they are ready to succeed in college and the workplace. These standards help set clear and consistent expectations for everyone involved in your child's learning.

### **A ruler for measuring student success**

The Smarter Balanced assessments measure student progress based on the standards, or learning expectations, for Grades 3-8 in English language arts and mathematics. The scores can be used as a ruler to measure the skills your child acquired throughout the school year. The tests provide information about achievement in the current grade and growth from one grade to the next.

### **Building a bridge between school and home**

At home, you can play an important role in setting high expectations and supporting your child in meeting them. If your child needs a little extra help or wants to learn more about a subject, work with his or her teacher to identify opportunities for tutoring, to get involved in clubs after school, or to find other resources. Talk to your child's teacher regularly about how your child is doing – beyond the parent-teacher conferences. By building a connection between home and school, you can greatly improve the impact of your child's learning.



# What Your Child Learned in **Grade 7**

## Mathematics

- Applying what is known about rates (such as miles per hour) and ratios (relationships between two numbers) to determine whether two quantities are in a proportional relationship (have equivalent rates or ratios).
- Using proportionality to solve a variety of percent problems, including those involving discounts, interest, taxes, and tips.
- Graphing proportional relationships and understand the unit rate (amount per 1) informally as a measure of the slope (steepness) of the related line.
- Solving multistep word problems by adding, subtracting, multiplying, and dividing positive and negative rational numbers in any form (whole numbers, fractions, or decimals).
- Solving real world problems that can be modeled with an inequality such as  $x > 8$  or an equation such as  $\frac{1}{4}(x + 5) = 21$  by answering the question: “What number does  $x$  have to be to make this statement true?”
- Solving real-world and mathematical problems involving the area (space inside) and circumference (distance around) of a circle, the area of two-dimensional objects such as triangles, and the volume (capacity inside) and surface area (total of all outside space) of three-dimensional objects such as boxes.
- Using and evaluating probability for single (picking a 4 from a deck of cards) and compound events (picking a 5 and then a 2 from a deck of cards).

## English Language Arts

- Citing several pieces of evidence when analyzing a text.
- Comparing and contrasting a written story, drama, or poem to an audio, filmed, or staged version.
- Identifying and evaluating specific claims and arguments in a text.
- Comparing and contrasting various texts, including poems, stories, and historical novels.
- Determining how an author’s word choices affect the meaning and tone of a text.
- Producing writing that is appropriate to the task, purpose, and audience.
- Using technology to produce and publish writing that links to sources.
- Conducting short research projects to answer a question, drawing information from several reliable sources.
- Including multimedia and visuals in presentations to help support their findings.
- Participating in class discussions about various texts and topics in which the student is prepared to refer to evidence in a text when discussing ideas, to restate other people’s ideas, and to understand other perspectives.

*Please note: Text is printed materials (books, newspapers, magazines) as well as graphics, drawings, and multimedia such as audio or visual recordings.*

## What Your Child Will Learn in **Grade 8**

### Mathematics

- Developing the understanding that every rational number (such as  $1/2$ ,  $0.3$ ,  $2$ , or  $-2$ ) can be written as a decimal, but that the decimal form of an irrational number (such as  $\sqrt{2}$  or  $\pi$ ) is both non-repeating and infinite (goes on forever).
- Using linear equations ( $y = mx + b$ ), systems of linear equations (two or more equations), and their understanding of slope (rate of change) to model situations and solve problems.
- Comparing the properties of two functions (a special rule) represented in different ways (table, graph, equation, or description).
- Using transformations translations (slides), rotations (turns), reflections (mirror image), and dilations (enlarging or shrinking) to understand congruence (the exact same) and similarity (proportional size).
- Using the Pythagorean Theorem (an equation relating the lengths of the sides of a right triangle:  $a^2 + b^2 = c^2$ ) to solve problems.
- Solving problems involving the volume (amount that can be held) of cylinders, cones, and spheres.
- Constructing scatterplots (many points on a graph) to examine the relationship between two quantities, for example, arm span and height.

### English Language Arts

- Citing evidence that most strongly supports an analysis of a book, article, poem, or play.
- Analyzing where texts on the same topic disagree on matters of fact or interpretation.
- Writing and developing a topic with well-chosen facts, definitions, details, quotations, or other information.
- Writing arguments that state a claim, identifying the claim from opposing views, and supporting the claim with reasons and evidence from accurate and credible sources.
- Conducting research projects that use many credible print and digital sources.
- Using technology to produce and publish writing and to work with others on writing.
- Participating in class discussions on various topics, texts, and issues by expressing ideas and building on others' ideas.
- Listening to another speaker's argument and evaluating whether the claims are based on sound reasoning and evidence, and identifying evidence that is irrelevant.

*Please note: Text is printed materials (books, newspapers, magazines) as well as graphics, drawings, and multimedia such as audio or visual recordings.*

# How You Can Help Your Child

## Mathematics

- Encourage your child to stick with a problem that may seem difficult at first.
- Reinforce mathematics by sharing your thinking as you work through real problems, especially if it takes some time and effort to find a solution.
- Point out proportional and linear relationships that are evident in everyday situations, such as cooking, verifying gas mileage, cell phone bills, etc.
- Encourage your child to use what is already known to find answers for new problems.
- Communicate with your child and the teachers about successes and challenges in mathematics class.
- Encourage your child to use magazines, clip art, and other sources to find examples of similar and congruent figures.

## English Language Arts

- Encourage your child to read books, magazines, or other materials on topics of interest.
- Ask “what if” questions about the texts your child is reading. What if a character responded differently to an event?
- Encourage your child to access resources at the library or on the Internet. Discuss why some websites are more credible than others by looking at where the information comes from, if it is a sponsored site, and how current the information is.
- Provide access to a dictionary, even if it is an online version. Children at this age may not want to ask for help with words, so easy access to a dictionary will be useful.
- Encourage your child to share opinions on issues, books, and movies to debate a topic. Have your child back up claims with evidence.
- Make a game out of expanding your child’s vocabulary. Choose five unfamiliar words to learn each week and see how often those words are used in everyday conversation. Not only does this improve vocabulary, it also increases reading comprehension and speaking skills.
- Talk to your children about what they are reading. Have your child summarize the text and ask him or her questions about the content. Connect your child with other materials, such as historical documents, music, photography, or maps that relate to the topic, author or time period.

# Resources

## Mathematics

### **Khan Academy**

This site provides an extensive library of user-friendly content for K–12 mathematics. Students can practice at their own pace and make use of interactive challenges and videos from any computer with access to the Internet.

<https://www.khanacademy.org/commoncore>

### **Illustrative Mathematics**

This site provides mathematical tasks, task solutions, and commentary on how the tasks illustrate content standards. The site also provides videos and vignettes illustrating mathematical practices. <http://www.illustrativemathematics.org>

## English Language Arts

### **Let's Raise the Bar**

Sponsored by America Achieves, this site offers helpful tools and free resources to learn how your child is doing and useful guidance on ways to help your child work on key skills where they need practice. <http://raisethebarparents.org/>

### **NEWSELA**

This website provides students with high-interest nonfiction articles that are updated daily. Each article offers a choice of five different reading levels, making it just right for each child. <https://newsela.com/>



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