



PARENTS' GUIDE TO Student Success

8TH GRADE

This guide provides an overview of what your child will learn by the end of 8th grade in mathematics and English language arts/literacy. It focuses on the key skills your child will learn in these subjects, which will build a strong foundation for success in the other subjects he or she studies throughout the school year. This guide is based on the new Common Core State Standards, which have been adopted by more than 40 states. These K–12 standards are informed by the highest state standards from across the country. If your child is meeting the expectations outlined in these standards, he or she will be well prepared for high school.

WHY ARE ACADEMIC STANDARDS IMPORTANT?

Academic standards are important because they help ensure that all students, no matter where they live, are prepared for success in college and the workforce. They help set clear and consistent expectations for students, parents, and teachers; build your child's knowledge and skills; and help set high goals for all students.

Of course, high standards are not the only thing needed for our children's success. But standards provide an important first step — a clear roadmap for learning for teachers, parents, and students. Having clearly defined goals helps families and teachers work together to ensure that students succeed. Standards help parents and teachers know when students need extra assistance or when they need to be challenged even more. They also will help your child develop critical thinking skills that will prepare him or her for college and career.

HOW CAN I HELP MY CHILD?

You should use this guide to help build a relationship with your child's teacher. You can do this by talking to his or her teacher regularly about how your child is doing — beyond parent-teacher conferences.

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.

THIS GUIDE INCLUDES

- An overview of some of the key things your child will learn in English/literacy and math in 8th grade
- Ideas for activities to help your child learn at home
- Topics of discussion for talking to your child's teacher about his or her academic progress

English Language Arts & Literacy

To prepare for bigger challenges in high school, 8th grade students must grapple with major works of fiction and nonfiction that extend across cultures and centuries. As they work diligently to understand precisely what an author or speaker is saying, students also must learn to question an author's or speaker's assumptions and assess the accuracy of his or her claims. They also must be able to report findings from their own research and analysis of sources in a clear manner.

A Sample of What Your Child Will Be Working on in 8th Grade

- Citing the evidence that most strongly supports an analysis of what is explicitly stated and/or implied from a book, article, poem, or play
- Analyzing where materials on the same topic disagree on matters of fact, interpretation, or point of view
- Learning how authors support their ideas through word choice, sentence and paragraph structure, and other methods
- Building writing around strong central ideas or points of view; supporting the ideas with sound reasoning and evidence, precise word choices, smooth transitions, and different sentence structures
- Planning and conducting research projects that include several steps and use many credible and documented print and digital sources
- Analyzing the purpose of information presented in diverse media (e.g., print, TV, web) and evaluating its social, political, or commercial motives
- Presenting findings and claims to others, emphasizing key points with relevant evidence and sound reasoning, adapting speech to the audience and the formality of the setting, and responding to questions and comments with relevant observations and ideas
- Using strong, active verbs to create a clear picture for the reader (e.g., *walk*, *skip*, *meander*, *lurch*, *limp*)
- Interpreting figures of speech (e.g., irony, puns) and developing a large vocabulary of general academic words and phrases

Talking to Your Child's Teacher

Keeping the conversation focused.

When you talk to the teacher, do not worry about covering everything. Instead, keep the conversation focused on the most important topics. In 8th grade, these include:

- Reading closely and drawing evidence from grade-level fiction and nonfiction works that most strongly supports an analysis of the material
- Developing a rich vocabulary of complex and sophisticated words and using them to speak and write more precisely and coherently

Ask to see a sample of your child's work. Ask the teacher questions such as: Is this piece of work satisfactory? How could it be better? Is my child on track? How can I help my child improve or excel in this area? If my child needs extra support or wants to learn more about a subject, are there resources to help his or her learning outside the classroom?

In 8th grade, your child will learn a number of skills and ideas that he or she must know and understand to be ready for college and career. Your child will continue to learn how to write and reason with algebraic expressions. Your child also will make a thorough study of linear equations with one and two variables. Building on previous work with relationships between quantities, your child will be introduced to the idea of a mathematical function. And your child will prepare for high school geometry by understanding congruence (same shape and size) and similarity of geometric figures.

A Sample of What Your Child Will Be Working on in 8th Grade

- Understanding slope, and relating linear equations in two variables to lines in the coordinate plane
- Solving linear equations (e.g., $-x + 5(x + \frac{1}{3}) = 2x - 8$); solving pairs of linear equations (e.g., $x + 6y = -1$ and $2x - 2y = 12$); and writing equations to solve related word problems
- Understanding functions as rules that assign a unique output number to each input number; using linear functions to model relationships
- Analyzing statistical relationships by using a best-fit line (a straight line that models an association between two quantities)
- Working with positive and negative exponents, square root and cube root symbols, and scientific notation (e.g., evaluating $\sqrt{36 + 64}$; estimating world population as 7×10^9)
- Understanding congruence and similarity using physical models, transparencies, or geometry software (e.g., given two congruent figures, show how to obtain one from the other by a sequence of rotations, translations, and/or reflections)
- Understanding and applying the Pythagorean Theorem ($a^2 + b^2 = c^2$) to solve problems

Keeping the conversation focused.

When you talk to the teacher, do not worry about covering everything. Instead, keep the conversation focused on the most important topics. In 8th grade, these include:

- Linear equations with one and two variables
- Functions
- Congruence and similarity of geometric figures

Ask to see a sample of your child's work. Ask the teacher questions such as: Is this piece of work satisfactory? How could it be better? Is my child on track? How can I help my child improve or excel in this area? If my child needs extra support or wants to learn more about a subject, are there resources to help his or her learning outside the classroom?

**Talking to
Your Child's
Teacher**

Help Your Child Learn at Home

Learning does not end in the classroom. Children need help and support at home to succeed in their studies. Try to create a quiet place for your child to study, and carve out time *every day* when your child can concentrate on reading, writing, and math uninterrupted by friends, brothers or sisters, or other distractions.

You should also try and sit down with your child at least once a week for 15 to 30 minutes while he or she works on homework. This will keep you informed about what your child is working on, and it will help you be the first to know if your child needs help with specific topics. By taking these small steps, you will be helping your child become successful both in and outside the classroom.

Additionally, here are some activities you can do with your child to support learning at home:

English Language Arts & Literacy

- Make time in everyone's busy schedule for family discussions about things going on around the world. Weekends can be a chance for everyone to catch up.
- Visit the campus of a local college with your teen. Begin talking about college early. What does he or she expect from college? What high school courses will your child need to pass to prepare for college?
- Make sure to keep books and magazines around the house that your child will enjoy reading and learning from. For a list of book recommendations, visit www.corestandards.org/assets/Appendix_B.pdf.

Mathematics

Ask your child to share with you any work he or she is doing in math class that strikes him or her as interesting. Some possibilities might include:

- Solving interesting problems involving cylinders and spheres, such as figuring out how much water fits inside a garden hose, or how many earths would fit inside the sun.
- Analyzing data with a scatterplot, for example to decide whether exercise and obesity are related.
- Solving "just for fun" algebra puzzles, such as: "I'm thinking of two numbers. The difference between the numbers is 40. Twice the smaller number is 20 more than the larger number. What are my numbers?"

For more information, the full standards are available at www.corestandards.org.



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PARENTS' GUIDE TO Student Success

HIGH SCHOOL ENGLISH

This guide provides an overview of what your child will learn during high school in English language arts. It focuses on the key skills your child will learn in

English, which will build a strong foundation for success in the other subjects he or she studies throughout high school. This guide is based on the new Common Core State Standards, which have been adopted by more than 40 states. These K–12 standards are informed by the highest state standards from across the country. If your child is meeting the expectations outlined in these standards, he or she will be well prepared for success after graduation.

WHY ARE ACADEMIC STANDARDS IMPORTANT?

Academic standards are important because they help ensure that all students, no matter where they live, are prepared for success in college and the workforce. They help set clear and consistent expectations for students, parents, and teachers; build your child's knowledge and skills; and help set high goals for all students.

Of course, high standards are not the only thing needed for our children's success. But standards provide an important first step — a clear roadmap for learning for teachers, parents, and students. Having clearly defined goals helps families and teachers work together to ensure that students succeed. Standards help parents and teachers know when students need extra assistance or when they need to be challenged even more. They also will help your child develop critical thinking skills that will prepare him or her for college and career.

HOW CAN I HELP MY CHILD?

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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.

THIS GUIDE INCLUDES

- An overview of some of the key things your child will learn in English language arts in high school
- Topics of discussion for talking to your child's teacher about his or her academic progress
- Tips to help your child plan for college and career

English Language Arts & Literacy

To become ready for college and career, high school students learn to evaluate intricate arguments and surmount the challenges posed by complex written materials independently and confidently. Through wide and deep reading of literature and literary nonfiction of steadily increasing sophistication, students expand their literary and cultural knowledge and better understand references and images. They also develop the flexibility, concentration, and fluency to produce high-quality, first drafts of writing under tight deadlines. And they are able to revisit and make improvements to a piece of writing over multiple drafts if needed. High school students master the essential “rules” of standard written and spoken English and resolve usage issues by consulting style and usage guides. By writing and participating in a variety of conversations, they assert and defend claims and show what they know about a subject using appropriate examples and evidence.

A Sample of the Work Your Child Will Be Doing To Become Ready for College and Career

READING

- Understanding more from and making fuller use of written materials, including using a wider range of evidence to support an analysis
- Making more connections about how complex ideas interact and develop within a book, essay, or article
- Evaluating arguments and specific claims; assessing whether the reasoning is valid and the evidence is sufficient; and as appropriate, detecting inconsistencies and ambiguities
- Analyzing the meaning of foundational U.S. documents (the Declaration of Independence, the Preamble to the Constitution, the Bill of Rights)

WRITING

- Making an argument that is logical, well-reasoned, and supported by evidence
- Writing a literary analysis, report, or summary that develops a central idea and a coherent focus and is well supported with relevant examples, facts, and details
- Conducting several research projects that address different aspects of the same topic, using more complex books, articles, and other sources

SPEAKING AND LISTENING

- Responding thoughtfully to diverse perspectives; synthesizing comments, claims, and evidence made on all sides of an issue; and resolving contradictions when possible
- Sharing research, findings, and evidence clearly and concisely
- Making strategic use of digital media (e.g., animations, video, websites, podcasts) to enhance understanding of findings and to add interest

LANGUAGE

- Determining or clarifying the meaning of words and phrases, choosing flexibly from multiple strategies, such as using context, Greek and Latin roots (e.g., *bene* as in *benefactor* or *benevolent*), patterns of words (*conceive*, *conception*, *conceivable*), and consulting specialized reference materials (e.g., dictionaries, glossaries, thesauruses)
- Interpreting figures of speech (e.g., hyperbole, paradox) in context and analyzing their role in the written materials

Keeping the conversation focused.

When you talk to the teacher, do not worry about covering everything. Instead, keep the conversation focused on the most important topics. In high school, these include:

- Focusing, reading deliberately and slowly, and rereading (when necessary) complex fiction and nonfiction materials
- Becoming skilled at gathering information, evaluating sources, and citing material accurately
- Asserting and defending claims, conveying what he or she understands about what he or she has read and researched
- Speaking clearly and appropriately, listening attentively when discussing findings and evidence, and building on others' good ideas while expressing his or her own ideas persuasively
- Learning to see individual words as part of a network of other words — e.g., words that have similar literal meanings but different connotations (e.g., *bullheaded*, *willful*, *firm*, *persistent*, *resolute*)

Ask to see a sample of your child's work. Ask the teacher questions such as: Is this piece of work satisfactory? How could it be better? Is my child on track? How can I help my child improve or excel in this area? If my child needs extra support or wants to learn more about a subject, are there resources to help his or her learning outside the classroom?



Talking to
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PARENT TIPS

Planning for College and Career

At the beginning of high school, sit down with your child's teachers, counselor, or other advisor to discuss what it will take for your child to graduate, your child's goals, and his or her plans after high school. Create a plan together to help your child reach these goals, and review it every year to make sure he or she is on track.

This plan should include:

- **An appropriate course sequence to meet your child's goals.** For example, if your child wants to study biosciences in college, he or she will likely need additional or advanced math and science courses in high school to be prepared for college-level coursework.
- **The most appropriate extracurricular activities for your child to participate in.** For example, if your child is interested in journalism or photography, encourage him or her to sign up for the school newspaper or yearbook. These activities will help your child expand his or her learning outside of school and may help foster new hobbies or interests.
- **Ways you can help your child prepare for college or career.** For example, if your child is interested in a particular field, look to see if internships exist to build his or her work experience in that subject area. Look for college fairs to attend, and encourage your child to visit colleges he or she might be interested in.
- **Finding ways to pay for college or advanced training.** College can be expensive, but there are lots of ways to get financial help, such as scholarships, grants, work study programs, and student loans. You just need to make the time for you and your child to do the research. You can start by helping your child fill out the FAFSA (Free Application for Federal Student Aid) during his or her senior year. Visit www.fafsa.ed.gov for help and more information on FAFSA and financial aid.

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A photograph of three students sitting at a desk in a classroom, focused on their work. They are using pencils and calculators. The background is a blue wall with a map.

PARENTS' GUIDE TO Student Success

This guide provides an overview of what your child will learn during high school in mathematics. It focuses on the key skills your child will learn in math, which will build a strong foundation for success in many of the other subjects he or she studies throughout high school. This guide is based on the new Common Core State Standards, which have been adopted by more than 40 states. These K–12 standards are informed by the highest state standards from across the country. If your child is meeting the expectations outlined in these standards, he or she will be well prepared for success after graduation.

HIGH SCHOOL MATH

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- Topics of discussion for talking to your child's teacher about his or her academic progress
- Tips to help your child plan for college and career

Mathematics

To prepare for college and career, your child will study mathematics across a broad spectrum, from pure mathematics to real-world applications. Numerical skill and quantitative reasoning remain crucial even as students move forward with algebra. Algebra, functions, and geometry are important not only as mathematical subjects in themselves but also because they are the language of technical subjects and the sciences. And in a data-rich world, statistics and probability offer powerful ways of drawing conclusions from data and dealing with uncertainty. The high school standards also emphasize using mathematics creatively to analyze real-world situations — an activity sometimes called “mathematical modeling.”

The high school standards are organized into six major content areas: Number and Quantity; Algebra; Functions; Modeling; Geometry; and Statistics and Probability.

A Sample of the Work Your Child Will Be Doing To Become Ready for College and Career

NUMBER AND QUANTITY

- Working with rational and irrational numbers, including working with rational exponents (e.g., rewriting $(5^3)^{1/2}$ as $5\sqrt{5}$)
- Solving problems with a wide range of units and solving problems by thinking about units (e.g., “The Trans Alaska Pipeline System is 800 miles long and cost \$8 billion to build. Divide one of these numbers by the other. What is the meaning of the answer?”; “Greenland has a population of 56,700 and a land area of 2,175,600 square kilometers. By what factor is the population density of the United States, 80 persons per square mile, larger than the population density of Greenland?”)

ALGEBRA

- Solving real-world and mathematical problems by writing and solving nonlinear equations, such as quadratic equations ($ax^2 + bx + c = 0$)
- Interpreting algebraic expressions and transforming them purposefully to solve problems (e.g., in solving a problem about a loan with interest rate r and principal P , seeing the expression $P(1+r)^n$ as a product of P with a factor not depending on P)

FUNCTIONS

- Analyzing functions algebraically and graphically, and working with functions presented in different forms (e.g., given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum)
- Working with function families and understanding their behavior (such as linear, quadratic, and exponential functions)

MODELING

- Analyzing real-world situations using mathematics to understand the situation better and optimize, troubleshoot, or make an informed decision (e.g., estimating water and food needs in a disaster area, or using volume formulas and graphs to find an optimal size for an industrial package)

GEOMETRY

- Proving theorems about triangles and other figures (e.g., that the angles in a triangle add to 180°)
- Solving applied problems involving trigonometry of right triangles

- Using coordinates and equations to describe geometric properties algebraically (e.g., writing the equation for a circle in the plane with specified center and radius)

STATISTICS AND PROBABILITY

- Making inferences and justifying conclusions from sample surveys, experiments, and observational studies
- Working with probability and using ideas from probability in everyday situations (e.g., comparing the chance that a person who smokes will develop lung cancer to the chance that a person who develops lung cancer smokes)

Keeping the conversation focused.

When you talk to the teacher, do not worry about covering everything. Instead, keep the conversation focused on the most important topics. In high school, these include:

- Does my child have a strong grounding in arithmetic, including operations on fractions, decimals, and negative numbers?
- Does my child take a thinking approach to algebra and work with algebraic symbols fluently?
- Is my child comfortable using coordinates in algebra and geometry?
- Can my child break a complex problem down into parts and apply the math he or she knows to problems outside of mathematics?
- Does my child use terms precisely and make logical arguments?
- Does my child have the knowledge to learn advanced mathematics after high school if he or she so chooses?

Ask to see a sample of your child's work. Ask the teacher questions such as: Is this piece of work satisfactory? How could it be better? Is my child on track? How can I help my child improve or excel in this area? If my child needs extra support or wants to learn more about a subject, are there resources to help his or her learning outside the classroom?



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PARENT TIPS

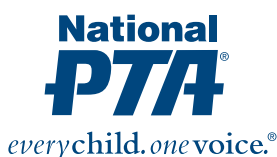
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This plan should include:

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- **Finding ways to pay for college or advanced training.** College can be expensive, but there are lots of ways to get financial help, such as scholarships, grants, work study programs, and student loans. You just need to make the time for you and your child to do the research. You can start by helping your child fill out the FAFSA (Free Application for Federal Student Aid) during his or her senior year of high school. Visit www.fafsa.ed.gov for help and more information on FAFSA and financial aid.

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