PTA

Overview

April 2010

Common Core State Standards Initiative:

Assuring that All Students Graduate From High School Ready for College and Career

WHAT IS THE COMMON CORE STATE STANDARDS INITIATIVE (CCSSI):

The CCSSI is a state-led effort designed to improve educational outcomes for students by developing a set of consistent, clear K-12 academic standards in English language arts and mathematics. In 2009 the National Governors Association (NGA) and the Council of Chief State School Officers (CCSSO), the coordinators of the initiative, convened a group of leading experts to develop K-12 standards for math and English language arts in 2010. These standards are relevant to the real world, reflecting the knowledge and skills young people need to be prepared for both college and work in a global economy.

WHY PTA BELIEVES STATES SHOULD ADOPT AND IMPLEMENT THE COMMON CORE STATE STANDARDS

The Problem: American students are graduating unprepared for college and career.

- **American students are poorly prepared for college and career.** Today, most good jobs require some type of postsecondary education or training. Yet, our education system is falling short in preparing students to succeed in higher education. It is estimated that each year, $1.4 billion is spent on remedial education for college students who have recently completed high school, a burden often borne by parents, students, and states.[1] Additionally, ACT found that less than a quarter of high school graduates are able to pass their classes (earn a C average) in their first year of college.[2]
- **In 1995, the U.S. was tied for first in the proportion of young adults with a college degree, but by 2004 it had fallen to 14th.[3]**
- **Out of 30 industrialized countries, the U.S. ranked 25th in math and 21st in science in 2006.[4]**

The Solution: Clear and consistent standards across the country and support for schools to help students achieve their full potential.

CLEAR AND CONSISTENT STANDARDS ACROSS THE COUNTRY

Standards will be consistent from state to state. CCSSI is based on the principle that arithmetic should be the same in Missouri or Michigan, and reading skills should be the same in California or Florida. Today there are different academic standards in every state, and too many states have standards that do not prepare students for college and career. Consistent standards will provide appropriate benchmarks for all students regardless of where they live and allow states to more effectively help all students succeed.

In addition, families who must move from one state to another because of job changes will particularly benefit from consistent standards across states. They will no longer face the problem of their children moving to a new school and finding that they are underprepared, because the standards of the state from which they are moving are lower than those of the state to which they are relocating.

Standards will be relevant to the real world. The Common Core State Standards will reflect the knowledge and skills that young people need to succeed in college and career. They will focus on problem solving and critical thinking skills, not solely on knowledge of particular facts that have little relationship to success later in life.

Standards will be clear. In many states, standards have been updated over the years by adding additional requirements onto existing standards. The result has been standards that are often so long and confusing that they do not function as clear guides for instruction. CCSSI will address this problem by increasing clarity among educators and parents about what students

PTA Takes Action

should be able to know and do at each grade level. States agreeing to adopt the standards may add a limited amount (no more than 15% of their overall standards) above and beyond what is in the core standards.

CCSSI aims to avoid additional testing. Because there are limits on how much states can add above and beyond the common core, these standards and the assessments that will be developed for them are expected to replace existing tests, not add to them.

Clearer standards will benefit parents, teachers and students. One of the benefits of adopting clearer standards is that parents, teachers and students will have a shared understanding of what is expected in school. Studies have shown that when parents are actively engaged in their children's education, student achievement outcomes are improved.[5]

Standards will incorporate the best and highest of the current state standards. This effort will build on what many states are already doing right. States with high standards will not be required to lower their standards in order to "meet in the middle" with states that now have lower standards.

SUPPORT FOR SCHOOLS TO HELP STUDENTS ACHIEVE THEIR FULL POTENTIAL

Higher standards combined with curriculum in our schools that emphasizes the skills needed to succeed in college and career will raise student achievement. Creating better standards is clearly just the first step in raising the level of achievement of all students. The next and more important step is creating schools that give students the support they need to realize their full potential. This will mean creating curricula that is aligned to the new standards and professional development for teachers to assure that they have the knowledge and skills to improve student achievement.

Common Core State Standards will make it easier for states to create first class education systems. Consistent standards across the states will create new efficiencies. States that previously used only multiple choice tests, because they were inexpensive to develop, will be able to share the cost of developing better assessments of students' abilities to perform in the real world. They will also be able to share the cost of developing curriculum and professional development for teachers aligned to the new standards.

Curriculum and assessment tied to clearer standards will increase student achievement. Studies have shown that when curriculum allows teachers to cover select topics in greater depth, rather than numerous topics superficially, student achievement is improved.[6] In addition, teachers will be able to better respond to students' educational needs using assessments that are aligned to the new standards.

RESOURCES AND CONTACT INFORMATION

For further information on National PTA's recommendations on CCSSI see PTA's annual Public Policy Agenda. Available online at: http://www.pta.org/public_policy_agenda.asp

If you should have any questions about National PTA and the CCSSI, please contact:

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(Endnotes)

1. Alliance for Excellent Education, *Paying Double: Inadequate High Schools and Community College Remediation* (Washington, D.C., 2006).

2. ACT, 2009 *ACT National and State Scores* (Iowa City, 2009), http://www.act.org/news/data/09/index.html.

3. National Governors Association, Council of Chief State School Officers and Achieve Inc., *Benchmarking for Success* (Washington, D.C., 2008), http://www.nga.org/Files/pdf/0812BENCHMARKING.PDF, 4.

4. Ibid., 12.

5. National PTA and Harvard Family Research Project, *Seeing is Believing: Promising Practices for How School Districts Promote Family Engagement* (Cambridge, 2009).

6. *Benchmarking for Success*, 25.

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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?

Mathematics

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

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:

- 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?

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 MATH

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.

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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.

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THIS GUIDE INCLUDES

- An overview of some of the key things your child will learn in math 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

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 180º)
- 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)

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 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?

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 of high school. Visit www.fafsa.ed.gov for help and more information on FAFSA and financial aid.

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

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