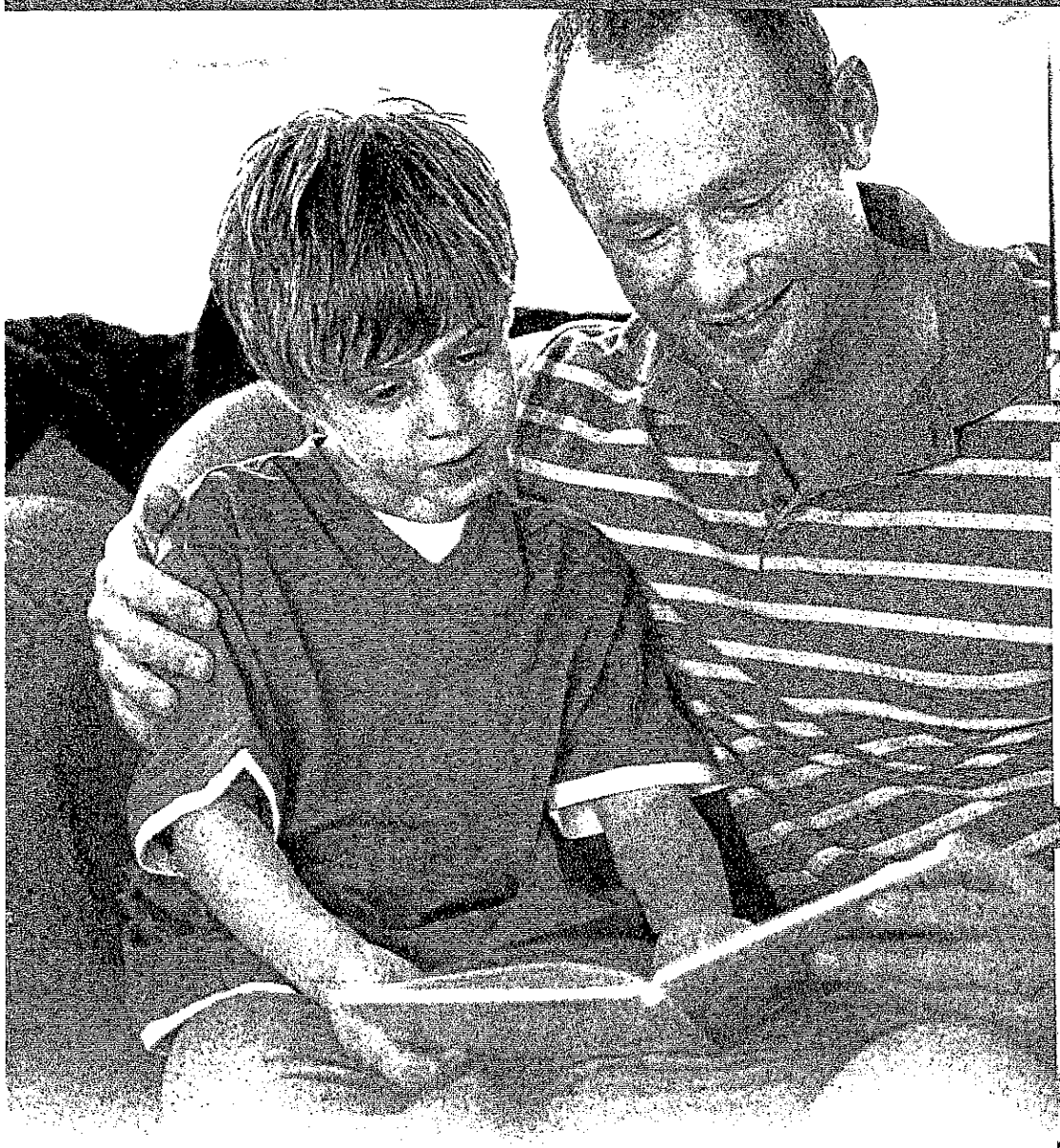
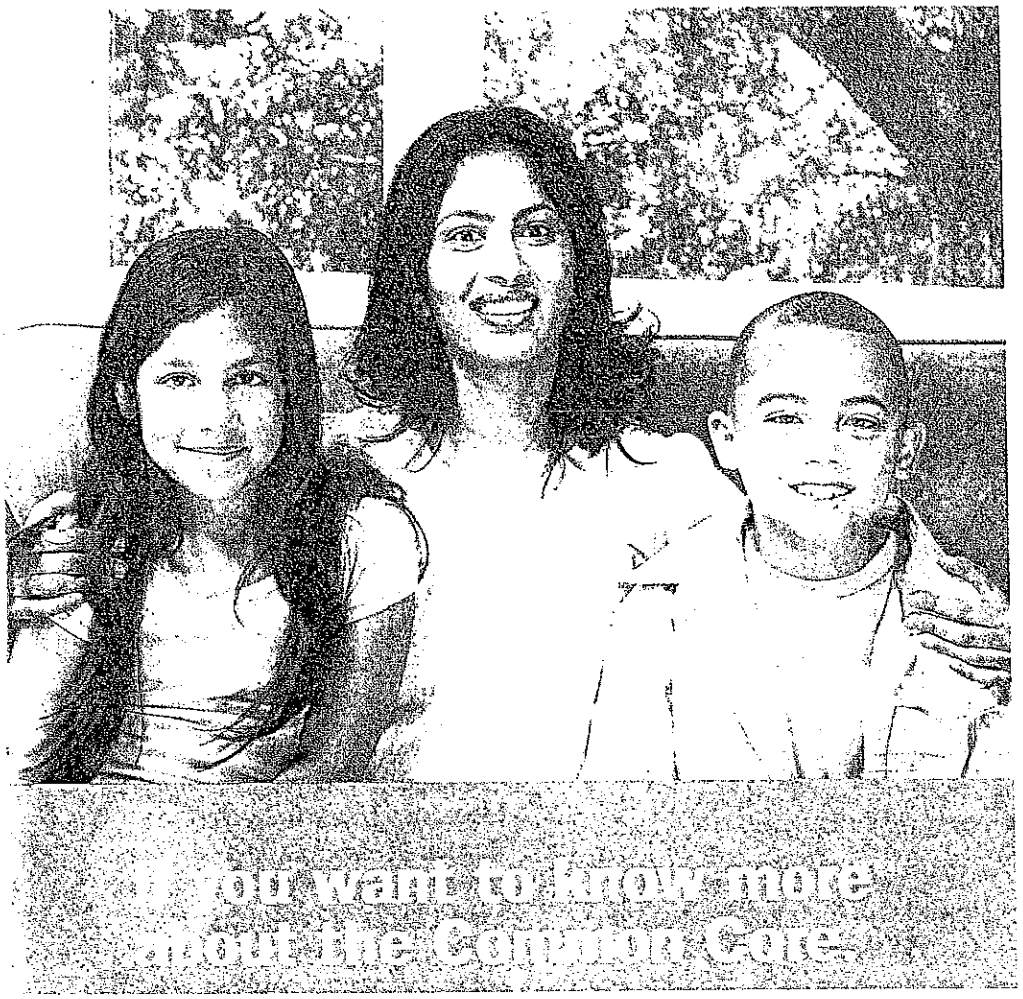
A Parent's **Handbook**

Understanding the Common Core State Standards

Grades K-5





this handbook is for you. Whether your child's school uses the Common Core now or will in the future, being informed helps you become a positive partner in your child's education.

The big picture

The Common Core State Standards are educational standards. They outline knowledge and skills that students should have at each grade level so that they will be ready to meet the demands of college or career after graduation.

The classroom view

The standards cover English Language Arts (ELA) and mathematics. Being able to read, to write and to reason with numbers is fundamental to success in school and in life. The ELA and math standards provide a blueprint for schools to help all students achieve that success.

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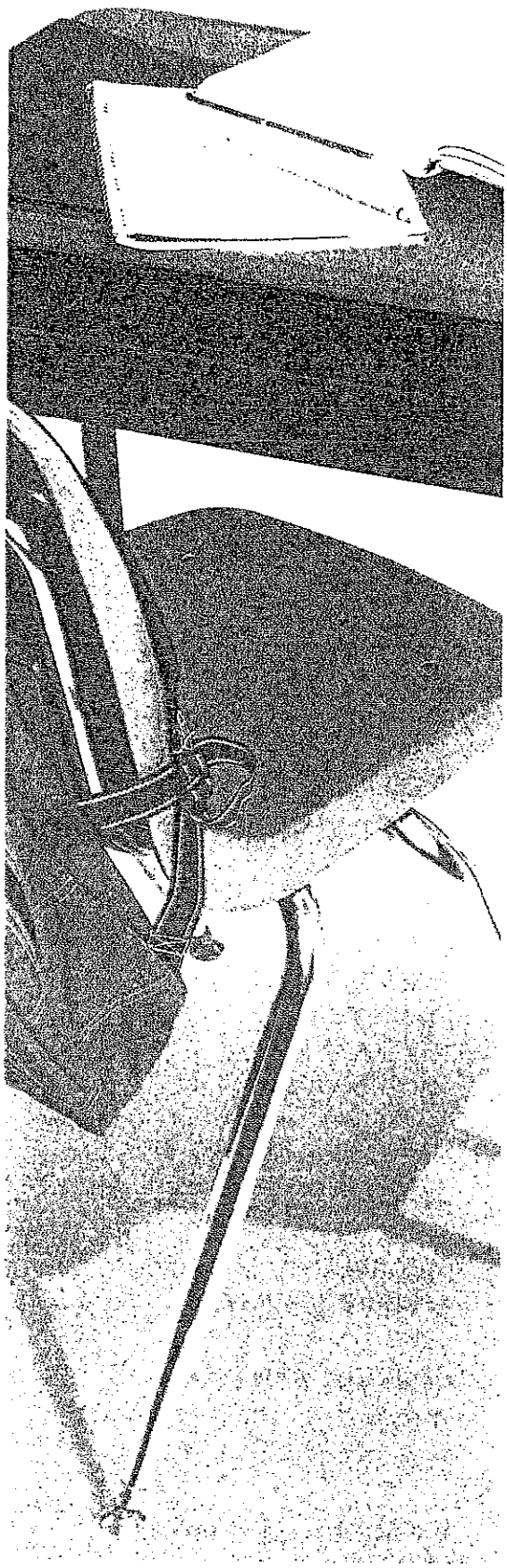


The Common Core addresses problems that have developed over a long period of time.

The U.S. has been falling behind.

For years, academic tests showed that students from the U.S. were behind students from other countries. In some cases, U.S. students were far behind. This was especially true in mathematics.

This has become a more urgent problem. The world is more connected than ever. Young people in the U.S. are competing for jobs with young people from other countries. More and more, strong reading, writing and math skills are required for good jobs.

States' standards have been inconsistent.

Students from some states have been falling behind students from other states. Governors and education leaders became concerned because they thought all young people should be well prepared for life after high school.

Adopting higher standards—the Common Core—means that the performance of all students can be raised to world-class standards.

Many students have not been college ready.

In recent years, colleges have been finding that many first-year students aren't ready to succeed, even in introductory courses.

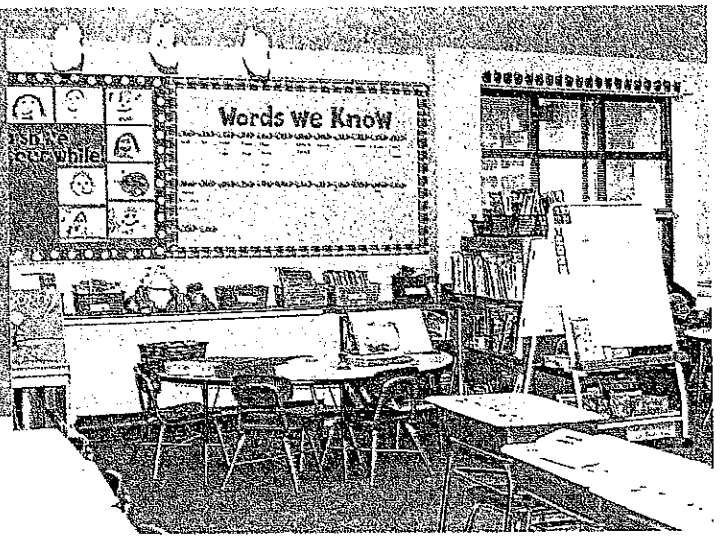
The answer has been to place more and more students into remedial classes. These classes teach basic reading, writing and math skills that the majority of high school graduates already have. As many as one-third of all college and university students take needed remedial classes.

Employers are looking for better-qualified high school grads.

Many students prefer to go right from high school into career-oriented employment or training. The knowledge and skills gained through meeting Common Core standards prepare students to excel in vocational/technical fields.

The Common Core State Standards match expectations for high school graduates with standards for college and career readiness.

Common Core myths vs. facts



What you hear about the Common Core may not always be accurate.

Myth: The Common Core is a national curriculum.

Fact:
The Common Core was created at the state level. Governors and state education leaders—working through the National Governors Association and the Council of Chief State School Officers—brought together many qualified people. These included:

- teachers
- parents
- administrators
- subject matter experts
- researchers.

They worked together to create the Common Core framework and write the standards themselves.

Myth: All states must use the Common Core.

Fact:
Each state decides whether it wants the Common Core in its schools or not. (Almost every state has chosen to adopt it.) States have been able to get funding for adopting college- and career-ready standards. But those standards do not have to be the Common Core.

Myth: Common Core takes away local control of schools.

Fact:
Governance of schools is not changing, whether they use Common Core or not. School boards will continue to have the same responsibilities as before. Districts and schools will still choose and buy the textbooks and supporting materials they want.

Myth: Common Core dictates what and how teachers teach.

Fact:
The Common Core is <u>not</u> a curriculum. It does not decide what books or other classroom materials teachers use (or don't use) or what lessons teachers teach (or don't teach). It does not require that teachers teach a certain way. Teachers will continue to make all of those choices themselves.

Think of it like healthy eating. There are many ways to get the nutrients you need to be healthy. You can choose a variety of foods to meet those needs. Under Common Core, there are certain skills and certain knowledge students need to have to be on track for college or career. Schools and teachers can—and will—choose how to help students gain that knowledge and those skills.

What's New: English Language Arts (ELA)

Built for the real world

The Common Core English Language Arts (ELA) Standards build on the best of older standards to create something more challenging and useful.

Emphasis on nonfiction

The ELA standards require that students read as much nonfiction as fiction. In the past, most reading assignments were of fiction—stories, poems, plays, fairy tales, legends, etc.

The emphasis on nonfiction will help students become more versatile readers. They can become just as comfortable with reading informational texts, such as articles in newspapers and magazines and on Web sites, as with storybooks.

Reading to learn about the world

To be successful in "the real world," it's important to learn about the world. This is part of the reasoning behind having Reading Informational Text standards. Having strong general knowledge and vocabulary equips students to adapt to the world and enter many different fields.

Adding complexity over time

As students progress from grade to grade, the Common Core helps them grow by challenging them with more complex reading. It's like a staircase. At the top is college- and career-level reading. Students must learn to reread and closely analyze text when they are challenged to fully understand these more complex readings. Once they succeed, they are ready to "step up" to the next challenge.

Building "academic" vocabulary

An *academic* vocabulary grows out of becoming familiar with words and phrases used in science, history, social studies and other fields. It's a vocabulary that will be useful in college and career. Teachers can help students build an academic vocabulary through reading, direct instruction and group discussions.

Analyzing writing by citing evidence

Students are often asked to write or talk about what they have read. The Common Core standards emphasize the importance of teaching students to analyze *how* writers make a point, construct an argument, compare and contrast, etc. The standards help students find "the evidence" in writing that reveals what a writer is trying to do.

Using evidence for writing

In the past, much of the writing students did in elementary school was to tell a personal story or to express a personal opinion. The Common Core will help expand young writers' abilities. They will use writing to build arguments, inform and persuade.

Often, these projects involve gathering evidence from research. Students will learn how to gather and analyze information—print and digital—for possible use in individual or group writing projects.

Standards are organized by "domain." English Language Arts (ELA) is broken into 4 domains, or major areas of skill and knowledge assessment. Within each domain, there are dozens of specific, detailed standards that students are expected to meet at each grade level. (See pages 10-15 for examples.) The ELA domains are:

Reading

Reading standards help ensure that students are exposed to a variety of materials and reading-related tasks. Materials and tasks become more complex as students progress from one grade to the next. The reading domain is further broken down into 3 areas of focus (see page 8 for details):

- literature
- informational text
- foundational skills.

Writing

As students progress from one grade to the next, they are expected to grow their vocabulary and ability to express more complex information. Their ability to organize information is expected to grow, as well.

Speaking and Listening

Students are expected to develop their ability to verbally express themselves and to understand information presented orally. They're also expected to participate in conversations and ask questions when needed.

Language

Students are expected to develop their ability to follow rules of grammar, spell, use words correctly and relate words to each other.

"Anchor Standards" complement grade-level ELA standards.

They address students' college and career readiness in each of the ELA domains described on this page. The Anchor Standards are broader and not targeted to individual grade levels. You can find more information about them at www.corestandards.org.

Grade by Grade: English Language Arts (ELA)

Reading: Literature

These examples of a few specific standards show the progress that students should make as they advance from K through 5.

Kindergarten

- With prompting and support, retell familiar stories, including key details.
- With prompting and support, describe the relationship between illustrations and the story in which they appear (e.g., what moment in a story an illustration depicts).

Grade 1

- Retell stories, including key details, and demonstrate understanding of their central message or lesson.
- Use illustrations and details in a story to describe its characters, setting, or events.

Grade 2

- Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson or moral.
- Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.

Grade 3

- Recount stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text.
- Explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story (e.g., create mood, emphasize aspects of a character or setting).

Grade 4

- Determine a theme of a story, drama, or poem from details in the text; summarize the text.
- Make connections between the text of a story or drama and a visual or oral presentation of the text, identifying where each version reflects specific descriptions and directions in the text.

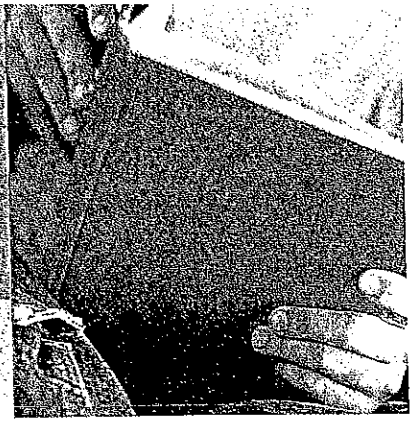
Grade 5

- Determine a theme of a story, drama, or poem from details in the text, including how characters in a story or drama respond to challenges or how the speaker in a poem reflects upon a topic; summarize the text.
- Analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text (e.g., graphic novel, multimedia presentation of fiction, folktale, myth, poem).

multimedia—using more than one way or tool to communicate information (for example, a graphic novel uses words and images; a film uses sound and moving images/animation)

Grade by Grade: English Language Arts (ELA)

Reading: Informational Text



These examples of a few specific standards show the progress that students should make as they advance from K through 5.

Kindergarten

- With prompting and support, describe the connection between two individuals, events, ideas or pieces of information in a text.
- Identify the front cover, back cover, and title page of a book.

Grade 1

- Describe the connection between two individuals, events, ideas, or pieces of information in a text.
- Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text.

Grade 2

- Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.
- Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.

Grade 3

- Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.
- Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.

Grade 4

- Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.
- Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.

Grade 5

- Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.
- Compare and contrast the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in two or more texts.

hyperlink (also link)—any text in an electronic document that, when clicked on, can take the reader to another place in the same document or to another electronic document.

To see more examples of Common Core reading standards, visit www.corestandards.org.

Grade by Grade: English Language Arts (ELA)

Reading: Foundational Skills

These examples of a few specific standards show the progress that students should make as they advance from K through 5.

Kindergarten

- Demonstrate basic knowledge of one-to-one letter-sound correspondences by producing the primary sound or many of the most frequent sounds for each consonant.
- Associate the long and short sounds with common spellings (graphemes) for the five major vowels.
- Read common high-frequency words by sight (e.g., *the, of, to, you, she, my, is, are, do, does*).
- Distinguish between similarly spelled words by identifying the sounds of the letters that differ.

Grade 1

- Know the spelling-sound correspondences for common consonant digraphs. [for example, *tr, pl, sp* and *st*]
- Decode regularly spelled one-syllable words.
- Know final -e and common vowel team conventions for representing long vowel sounds.
- Decode two-syllable words following basic patterns by breaking the words into syllables.
- Read words with inflectional endings. [for example, *-s, -es, -ing, -ed*]
- Recognize and read grade-appropriate irregularly spelled words.

Grade 2

- Distinguish long and short vowels when reading regularly spelled one-syllable words.
- Know spelling-sound correspondences for additional common vowel teams.
- Decode regularly spelled two-syllable words with long vowels.
- Decode words with common prefixes and suffixes.
- Identify words with inconsistent but common spelling-sound correspondences.
- Recognize and read grade-appropriate irregularly spelled words.

Grade 3

- Identify and know the meaning of the most common prefixes and derivational suffixes.
- Decode words with common Latin suffixes.
- Decode multisyllable words.
- Read grade-appropriate irregularly spelled words.

Grade 4

- Use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.

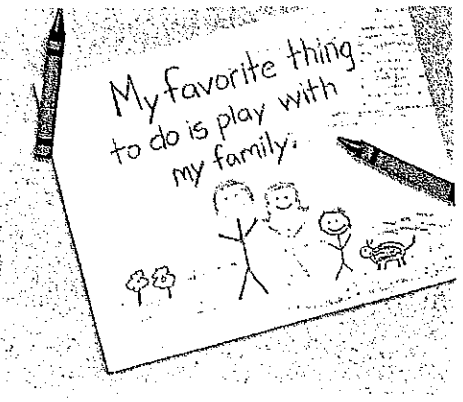
Grade 5

- Use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.

derivational suffix—a word ending that gives the word a different but related meaning, such as *-er* (*teach/teacher*) and *-ness* (*happy, happiness*)

morphology—the study of word parts with meaning, called morphemes (for example, *misunderstanding* has 3 parts: mis+understand+ing)

Grade by Grade
English Language Arts (ELA)
Writing



These examples of a few specific standards show the progress that students should make as they advance from K through 5.

Kindergarten

- Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book (e.g., *My favorite book is…*).

Grade 1

- Write opinion pieces in which they introduce the topic or name the book they are writing about, state an opinion, supply a reason for the opinion, and provide some sense of closure.

Grade 2

- Write opinion pieces in which they introduce the topic or name the book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., *because, and, also*) to connect opinion and reasons, and provide a concluding statement or section.

Grade 3

- Write opinion pieces on topics or texts, supporting a point of view with reasons.
  - a. Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons.
  - b. Provide reasons that support the opinion.
  - c. Use linking words and phrases (e.g., *because, therefore, since, for example*) to connect opinion and reasons.
  - d. Provide a concluding statement or section.

Grade 4

- Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
  - a. Introduce a topic or text clearly, state an opinion, and create an organizational structure in which related ideas are grouped to support the writer's purpose.
  - b. Provide reasons that are supported by facts and details.
  - c. Link opinion and reasons using words and phrases (e.g., *for instance, in order to, in addition*).
  - d. Provide a concluding statement or section related to the opinion presented.

Grade 5

- Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
  - a. Introduce a topic or text clearly, state an opinion, and create an organizational structure in which ideas are logically grouped to support the writer's purpose.
  - b. Provide logically ordered reasons that are supported by facts and details.
  - c. Link opinion and reasons using words, phrases and clauses (e.g., *consequently, specifically*).
  - d. Provide a concluding statement or section related to the opinion presented.

On page 12:

decode—to recognize, figure out, read

multisyllabic—having more than one syllable

To see more examples of Common Core writing standards, visit www.corestandards.org.

Grade by Grade: English Language Arts (ELA)

Speaking and Listening

These examples of a few specific standards show the progress that students should make as they advance from K through 5.

Kindergarten

- Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
- Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.

Grade 1

- Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.
- Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.

Grade 2

- Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.
- Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.

Grade 3

- Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.
- Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.

Grade 4

- Identify the reasons and evidence a speaker provides to support particular points.
- Report on a topic or text, tell a story, or recount an experience in an organized manner, with appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

Grade 5

- Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.
- Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

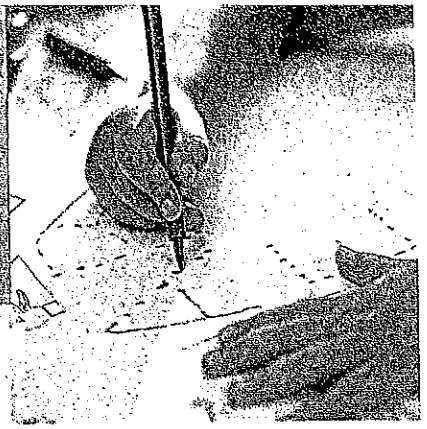
On page 15:

interrogative sentence—a direct question (always ends with a question mark)

imperative sentence—a direct command, such as "close the door" or "help yourself" (always ends with a period or exclamation point)

Grade by Grade: English Language Arts (ELA)

Language



These examples of a few specific standards show the progress that students should make as they advance from K through 5.

Kindergarten

- Print many upper- and lowercase letters.
- Form regular plural nouns orally by adding /s/ or /es/ (e.g., *dog, dogs; wish, wishes*).
- Understand and use question words (interrogatives) (e.g., *who, what, where, when, why, how*).
- Produce and expand complete sentences in shared language activities.

Grade 1

- Print all upper- and lowercase letters.
- Use frequently occurring adjectives.
- Produce and expand complete simple and compound declarative, interrogative, imperative, and exclamatory sentences in response to prompts.

Grade 2

- Use reflexive pronouns (e.g., *myself, ourselves*).
- Use adjectives and adverbs, and choose between them depending on what is to be modified.
- Produce, expand and rearrange complete simple and compound sentences (e.g., *The boy watched the movie; The little boy watched the movie; The action movie was watched by the little boy*).

Grade 3

- Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences.
- Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what is to be modified.
- Form and use the simple (e.g., *I walked, I walk, I will walk*) verb tenses.
- Produce simple, compound, and complex sentences.

Grade 4

- Use relative pronouns (*who, whose, whom, which, that*) and relative adverbs (*where, when, why*).
- Order adjectives within sentences according to conventional patterns (e.g., *a small red bag* rather than *a red small bag*).
- Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons.
- Correctly use frequently confused words (e.g., *to, too, two; there, their*).

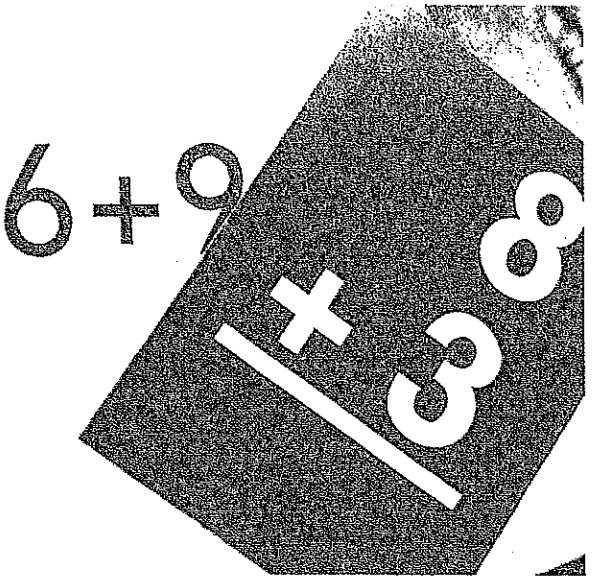
Grade 5

- Form and use the perfect (e.g., *I had walked, I have walked, I will have walked*) verb tenses.
- Use verb tense to convey various times, sequences, states, and conditions.
- Explain the function of conjunctions, prepositions, and interjections in general and their function in particular sentences.
- Use correlative conjunctions (e.g., *either/or, neither/nor*).

The standards shown above focus on the conventions of English grammar and usage (in writing or speaking). For other Language standards, see www.corestandards.org.

What's New: Math

Understanding and application



The Common Core math standards make some key shifts compared to previous standards.

More focus on fewer topics

By focusing on fewer concepts, students can gain deeper understanding and build a stronger foundation for learning in higher grades. Better grasp of fundamental concepts allows them to progress to more advanced concepts with greater confidence and ease. Under Common Core, the focus is on certain topics in grades K-2 before shifting ahead in grades 3-5.

- K-2: Concepts, skills and problem solving related to addition and subtraction
- 3-5: Concepts, skills and problem solving related to multiplication and division of whole numbers and fractions.

Deep understanding

Instead of simply memorizing facts, math students will be taught to understand why the facts are true. This will lead to students becoming more effective problem solvers.

Linking topics across grade levels

Math concepts naturally connect. (For example, multiplication is a "fast" form of addition.) The math standards are careful to ensure that students are using concepts learned in previous years to build understanding of new topics. Standards in the past didn't always make these links.

Applying concepts—quickly and accurately

Using their deep understanding of key concepts, math students will learn to:

- apply math concepts appropriately
- calculate precisely and with sufficient speed.

Each math domain has many standards.

The standards go into detail about what students should know and be able to do. The exact wording of some of these standards is shown on pages 19-22.

The standards use technical math terms that are well known to most teachers but might not be familiar to parents. These terms have been in use for years and are not unique to the Common Core.

Some of these words and phrases are defined at the bottom of the pages. If there are others you do not understand, ask your child's teacher about them.

Structure: Math

Like the ELA standards, the math standards form a framework.

Mathematics is broken into 2 broad categories under the Common Core. They are equally important and, like the English Language Arts domains, each one has many specific, detailed standards. (See pages 19-22 for examples.) The 2 broad categories are:

Mathematical Practice

The Standards for Mathematical Practice emphasize the understanding of concepts and problem-solving processes. These standards are the same for all grade levels. They are:

- MP1: Make sense of problems and persevere in solving them.
- MP2: Reason abstractly and quantitatively.
- MP3: Construct viable arguments and critique the reasoning of others.
- MP4: Model with mathematics.
- MP5: Use appropriate tools strategically.
- MP6: Attend to precision.
- MP7: Look for and make use of structure.
- MP8: Look for and express regularity in repeated reasoning.

Mathematical Content

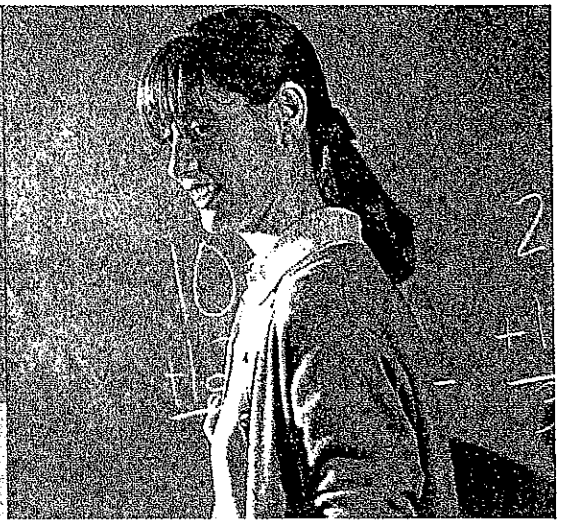
The Standards for Mathematical Content, like the English Language Arts Standards, are specific descriptions of what students should understand and be able to do by the time they finish a grade level. They are organized by the following domains:

- Counting and Cardinality (K only)
- Operations and Algebraic Thinking (K-5)
- Number and Operations in Base Ten (K-5)
- Number and Operations—Fractions (3-5 only).
- Measurement and Data (K-5)
- Geometry (K-5)

Overview: Math

Exploring mathematics under the Common Core

The lists below provide an overview of learning within each of the math content domains.



Counting and Cardinality
(Kindergarten only)

- number names and sequence
- counting to tell the number of objects
- comparing numbers

Operations and Algebraic Thinking

- understanding addition as putting together and adding to, and understanding subtraction as taking apart and taking from
- working with addition and subtraction equations
- understanding properties of multiplication and the relationship between multiplication and division
- using the four operations (addition, subtraction, multiplication and division) with whole numbers to solve problems
- writing and interpreting numerical expressions

Number and Operations in Base Ten

- understanding place value
- using place value understanding and properties of operations to add and subtract
- generalizing place value understanding for multi-digit whole numbers
- performing operations with multi-digit whole numbers and with decimals to hundredths

Number and Operations—Fractions
(Grades 3-5)

- gaining understanding of fractions as numbers
- extending understanding of equalities and sequence among fractions
- understanding decimal notation for fractions, and comparing decimal fractions

Measurement and Data

- describing and comparing measurable attributes
- telling and writing time
- working with time and money
- relating addition and subtraction to length
- solving problems involving measurement and estimation of intervals of time, liquid volumes and masses of objects
- geometric measurement: understanding concepts of volume and relating volume to multiplication and addition

Geometry

- comparing, creating and composing shapes
- reasoning with shapes and their attributes
- drawing and identifying lines and angles, and classifying shapes by properties of their lines and angles
- graphing points on the coordinate plane to solve real-world and mathematical problems

cardinality—related to the cardinal numbers (numbers that say how many of something there are, such as 3 books, 5 trees, 7 coins, etc.)

place value—the value of where the digit is in the number (for example, in 823, 8 is 8 hundreds, 2 is 2 tens and 3 is 3 ones)

Operations and Algebraic Thinking

These examples of a few specific standards show the progress that students should make as they advance from K through 5.

Kindergarten

- Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

Grade 1

- Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

Grade 2

- Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Grade 3

- Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Grade 4

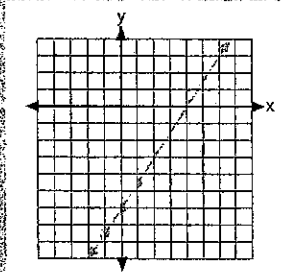
- Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Grade 5

- Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. *For example, express the calculation "add 8 and 7, then multiply by 2" as $2 \times (8 + 7)$. Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$, without having to calculate the indicated sum or product.*

On page 18:

coordinate plane



Standards for Counting and Cardinality apply to kindergarten only. To see them, visit www.corestandards.org.

Number and Operations in Base Ten

These examples of a few specific standards show the progress that students should make as they advance from K through 5.

Kindergarten

- Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

Grade 1

- Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.
- Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.

Grade 2

- Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand ... 100 can be thought of as a bundle of ten tens—called a "hundred."...
- Count within 1000; skip-count by 5s, 10s, and 100s.

Grade 3

- Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
- Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9×80, 5×60) using strategies based on place value and properties of operations.

Grade 4

- Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. *For example, recognize that $700 \div 70 = 10$ by applying concepts of place value and division.*
- Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations....

Grade 5

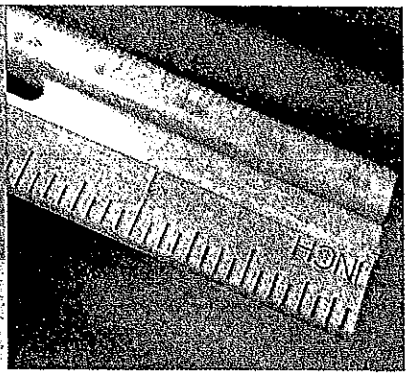
- Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left.
- Read, write, and compare decimals to thousandths.
  a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (\frac{1}{10}) + 9 \times (\frac{1}{100}) + 2 \times (\frac{1}{1000})$....

algorithm—a process or set of rules to follow when solving problems or doing calculations

Standards for Number and Operations—Fractions apply to Grades 3-5 only. To see them, visit www.corestandards.org.

Grade by Grade: Math

Measurement and Data



These examples of a few specific standards show the progress that students should make as they advance from K through 5.

Kindergarten

- Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.
- Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

Grade 1

- Order three objects by length; compare the lengths of two objects indirectly by using a third object.
- Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

Grade 2

- Estimate lengths using units of inches, feet, centimeters, and meters.
- Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.

Grade 3

- Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems....
- Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information in scaled bar graphs....

Grade 4

- Apply the area and perimeter formulas for rectangles in real world and mathematical problems. *For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.*
- Make a line plot to display a data set of measurements in fractions of a unit (½, ¼, ⅛). Solve problems involving addition and subtraction of fractions by using information presented in line plots....

Grade 5

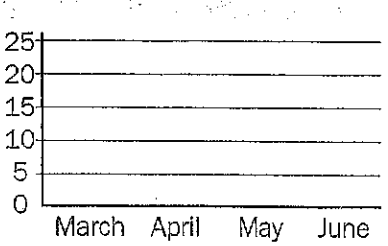
- Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.
- Recognize volume as an attribute of solid figures and understand concepts of volume measurement....
- Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume....

scaled picture graph

Month	Number of fish sold
March	🐟 🐟
April	🐟 🐟 🐟 🐟 🐟
May	🐟 🐟 🐟 🐟
June	🐟

Key: 🐟 = 5 fish

scaled bar graph



Grade by Grade: Math

Geometry

These examples of a few specific standards show the progress that students should make as they advance from K through 5.

Kindergarten

- Correctly name shapes regardless of their orientations or overall size.
- Compose simple shapes to form larger shapes. *For example, "Can you join these two triangles with full sides touching to make a rectangle?"*

Grade 1

- Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.

Grade 2

- Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
- Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words *halves, thirds, half of, a third of,* etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

Grade 3

- Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.

Grade 4

- Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
- Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.

Grade 5

- Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. *For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.*

To see more examples of Common Core math standards, visit www.corestandards.org.

Frequently asked questions

These FAQs provide more Common Core ABCs.

Are the standards about what students know or what they can do?

They are about both. The Common Core includes expectations for both content and skills. And, as students progress to high school, it emphasizes merging content and skills with the understanding of how to apply them in the real world.

Do the standards have a required reading list?

No. The standards do include examples of readings that would be appropriately challenging at each grade level. But these are examples only. Teachers select the books they use in class (schools and districts too, in some cases).

Why are the math topics in a different sequence from how schools used to teach them?

It only appears that way because so many states had different math standards. What was taught at one level in one state would often be taught at a different level in another state.

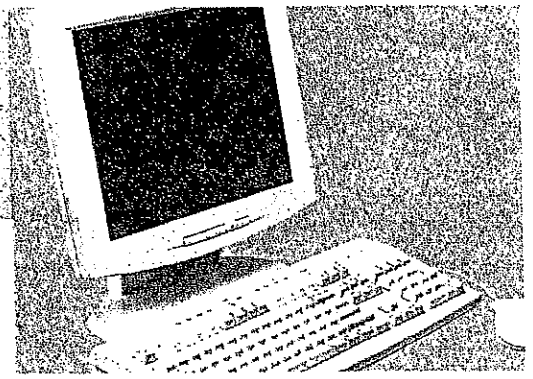
The way the standards arrange math topics makes sense for students. It's based on evidence. If students master the topics from grade level to grade level, they will be college- and career-ready by the time they graduate.

Common Core and data collection

Some parents have wondered, "With Common Core, will my child be entered into a national database where data is collected about him or her?"

The answer is no. The testing students do for Common Core is developed by outside organizations. There are no requirements for data collection or storage in the Common Core. Each state decides how it wants the data from testing to be used.

To learn more about testing and the Common Core, see pages 26-27.



The Common Core assessments are standardized tests. In selected grades, all students in states that use the Common Core must be tested.

Testing provides important information.

Parents can find out if their children are proficient in skills that prepare them for college, career and life. (Reports of test results will be mailed to parents.)

Teachers can learn how effective their classroom strategies have been.

Schools in the same state can compare their results.

School administrators can analyze areas where teachers and students can use more support.

New tests are broader than older tests.

New Common Core tests offer more kinds of questions than earlier standardized tests did. For each grade level, they include questions that test:

more complex thinking

more advanced skills

deeper level of knowledge.

The questions go well beyond multiple choice.

For example, there may be "technology-enhanced" and "extended performance" questions that require students to demonstrate their ability to:

reason using evidence

do research

communicate effectively

do extended problem solving.

Practice tests online can help your child get used to answering these kinds of questions (see next page).

New tests reinforce the Common Core.

Testing has been developed by different professional organizations that specialize in school assessments. They focused on creating tests that reflect the goals of the Common Core. In the past, most states would develop their own tests (and they still can). States choosing to use tests developed for the Common Core have a number of such tests to choose from.

Testing may be online.

Students may be able to use electronic devices to take new Common Core assessments online. This brings possible benefits such as:

The results may be delivered faster.

Schools may need to upgrade their computer networks to handle the testing (and more).

Schools that use the same testing service can share other key resources through the online network. These include instructional units and professional development materials.

States that want to use their own assessments—or create new ones—can do so.

Testing is late in the school year.

- Testing is in English Language Arts and in Mathematics.
- In all, testing takes 7-10 hours over several sessions.
- Depending on which set of tests a state chooses, students in grades 3-11 may be tested.

There are also tests that schools can choose to use earlier in the school year to measure student progress.

Improved testing is being developed for special needs students.

Many states are working together to produce Common Core assessments for:

- students with significant cognitive disabilities
- English language learners.

In the past, states have struggled to create good assessments for these groups. New testing will give teachers and families a better understanding of a student's skill levels and readiness for college and/or the workplace.

Practice questions and practice tests are available online.

Ask your child's teacher which Web site(s) and practice tests would be the most helpful for your child. Options include:

- www.smarterbalanced.org
- www.parcconline.org
- www.commoncoreworks.org
- achievethecore.org
- www.engageny.org.

Find out about the Common Core testing at your child's school.

Having answers to these questions will help you help your child be prepared:

Which testing has our state chosen to use (for example, PARCC, Smarter Balanced, state-created, etc.)?

_____

How are teachers and the school helping children prepare for testing?

_____

What are the dates for my child's testing?

_____

What materials or resources can help my child get ready for the tests?

_____

_____

Tips for test-taking

No matter your child's age, and no matter the subject, these tips can help him or her. Remind your child to:

Listen closely to directions at the start.

Pay close attention to what the test monitor says before the test starts. It's a good time to ask questions if you don't understand what to do.

Read all written directions.

Read them slowly and carefully. Reread them if you need to. Do not answer any questions until you fully understand the directions.

Look through the test from start to finish.

This will give you a sense of how much time to give each question or section. (Note: This may not be possible with every type of test.)

Do the easiest problems first, if possible.

This leaves more time for the tougher problems. Don't spend too much time on any single problem. Move to another problem if you get stuck. You can return to the problem later if there is time.

Read the whole problem.

Very small words—such as *not*—can make a very big difference in a question. Also, focus on any visuals provided (illustrations, charts, graphs, etc.). They are there for a reason—to help you answer correctly.

Check your answers, if you have time.

If you finish before the end of the test, go back and check your answers, if possible.

Notes: _____

The night before

Follow the usual bedtime routine. Don't focus on the test—it could make your child anxious. If you sense that your child is nervous about testing the next day, try to have some fun. For example, you could play a game or watch a funny movie.

Get things ready for the morning to avoid feeling rushed.

The morning of the testing

Provide a healthy breakfast. But don't make it too sugary or too big. That can cause a "crash" or make your child feel sleepy during test time.

Set a relaxed tone before school. This will help your child relax, too.

The confidence cure

In all situations, show your child that you have confidence in him or her. This helps build self-confidence. In any situation that could be stressful (such as testing), self-confidence can help your child think clearly.

Tell your child that giving his or her best effort is enough. Going into the test, your child should know that you'll be proud of him or her no matter what.

Techniques to ease anxiety

If your child gets nervous during tests, teach him or her these simple, quick ways to calm oneself:

- take a deep breath, hold it for several seconds, then slowly let it out (repeat 4-5 times)
- tense and relax tight muscles
- silently count backwards slowly (starting from 10 or 20).

Why might a child feel test anxiety?

It's common (even among adults). A child might:

- feel pressure from parents
- be worried that his or her teacher will be disappointed or his or her school will suffer if results are not good
- find the testing environment intimidating—for example, he or she may not be used to the room, the people or the quiet
- lack confidence when having to "perform" in public.

The tips on this page can help your child cope with anxious feelings.

Reassure your child that feeling nervous or anxious about testing is normal—and manageable.

Want to continue educating yourself about the Common Core State Standards? Here are some good options:

Local

- your child's teacher(s)
- your child's principal
- your child's superintendent of schools

Common Core State Standards Initiative

www.corestandards.org

State

your state's Department of Education. Find it at: www2.ed.gov/about/contacts/state/index.html.

National

U.S. Department of Education
1-800-USA-LEARN
(1-800-872-5327)
1-800-877-8339 (TTY)
www.ed.gov

National Coalition for Parent Involvement in Education
www.ncpie.org

Partnership for Assessment of Readiness for College and Careers (PARCC)
www.parcconline.org

Smarter Balanced Assessment Consortium
www.smarterbalanced.org

National PTA
www.pta.org.

Need to remember a number or Web page?

For any of the resources listed above, or others, use the space below to write down contact information.