



# The Common Core State Standards and Developmentally Appropriate Practices: Creating a Relationship

Susan Carey Biggam and Marilou Carey Hyson

**Anna is a kindergarten teacher in a public school. Over the past year she has been hearing more and more about the Common Core. At the last**

faculty meeting, her principal announced that starting next year the school district will be using the Common Core State Standards for English language arts/literacy and mathematics in all classrooms, from kindergarten through grade 12. The principal told teachers to look for announcements of professional development meetings and other guidance about how to implement these new standards. Anna's friend Rochelle, who teaches in a local prekindergarten program, mentioned that her director has also been talking about these standards and how the Common Core might influence their curriculum.

At this point, Anna has many questions:

- What are these Common Core standards, anyway?
- Where did they come from, and what are they supposed to accomplish?
- What will they mean for me as a teacher and for the children I teach?
- What will they mean for programs for younger children?
- Will I have to neglect other aspects of the curriculum to focus only on English language arts/literacy and math?
- Will I be able to continue to use developmentally appropriate practices (DAP), including playful learning, or will these new standards dictate a radical change in how I must teach?



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In this chapter, we try to answer these questions not only for kindergarten teachers like Anna, but also for teachers, principals, program directors, and other education leaders. We will

- Identify the essential features of the Common Core State Standards and their connections to the work of teachers and other early childhood professionals
- Increase practitioners' comfort and skill in implementing developmentally appropriate practices when addressing the Common Core standards
- Identify resources that may help practitioners understand, think critically about, and address the Common Core
- Provide a framework for action steps that will help you, the children you teach, and others with a stake in the Common Core

## What the Common Core Is, and What It Is Not

### What the Common Core Is: The Intended Benefits

In the past, each state had its own standards, or intended learning outcomes, for children from kindergarten through 12th grade. However, many education leaders thought that the United States, like most other countries, would benefit from a common set of expectations nationwide. The goal of the Common Core State Standards Initiative ([www.corestandards.org](http://www.corestandards.org)) was to establish a common set of expectations for students who, when completing secondary education, would be “college and career ready.” With this goal in mind, the developers of the Common Core (including researchers, teachers, and higher education professionals) started by defining what students should know and be able to do by the time they finished high school. The developers then wrote grade-level progressions to build solid foundations for each of these expectations.

As of this writing, 45 states, the District of Columbia, and three territories have already adopted these standards, but with varied implementation timelines.

### What the Common Core Is Not: The Standards' Limitations

Just as it is important for early childhood educators to have a basic understanding of what the Common Core *is*, it's equally important to understand what it is *not*, and what it never was intended to be.

**First, the Common Core is not a comprehensive description of everything children should know and be able to do.** So far, the only content areas for which Common Core standards have been written are English language arts/literacy and mathematics. With

## Criteria Used in Developing the Standards

According to the Common Core State Standards Initiative (NGA & CCSSO 2010), the standards were designed to give teachers and parents an understanding of what students from kindergarten through grade 12 should be expected to learn. To achieve that end, the developers tried to ensure that the standards

- Are aligned with college and work expectations
- Are clear, understandable, and consistent
- Include rigorous content and application of knowledge through higher-order skills
- Build upon strengths and lessons of current state standards
- Are evidence based
- Are informed by other top performing countries, so that all students are prepared to succeed in our global economy and society

**Source:** [www.corestandards.org](http://www.corestandards.org).



the needs of the whole child in mind, NAEYC and other organizations (ASCD 2012; NAEYC 2011; NAEYC & NAECS/SDE 2010) have expressed concern that the Common Core’s exclusive focus may cause a narrowing of the kindergarten and primary grade curriculum, resulting in neglect of social and emotional development, approaches to learning, and other content areas such as science and the arts. Later in this chapter we will use classroom examples to show that this narrowing of curriculum can be avoided if educators are constructively critical and intentional about how the standards are implemented.

**Second, the Common Core is not a curriculum and it is not a prescribed set of teaching practices.** As emphasized in a position statement on early learning standards (NAEYC & NAECS/SDE 2002), standards describe desired results or outcomes for children, but they are not intended to provide detailed descriptions of the kinds of experiences and activities that are likely to lead to those outcomes, nor the methods that may be most effective. The developers of the CCSS are very clear on this point. For example, the Introduction to the English language arts and literacy standards notes that “The Standards define what all students are expected to know and be able to do, not how teachers should teach. For instance, the use of play with young children is not specified by the Standards, but it is welcome as a valuable activity in its own right and as a way to help students meet the expectations in this document” (NGA & CCSSO 2010, 6).

**Third, the Common Core standards begin at kindergarten; they are not a description of what preschool children should know and be able to do.** Those who design preschool programs need to know about higher-grade expectations, but teachers like Rochelle should focus on age-appropriate content and foundational experiences, rather than teaching content intended for older children. Many states are now working to coordinate or align their early learning guidelines with the Common Core, and some states have developed new literacy and math standards for their preschool programs specifically connected to the content of the K–12 Common Core. Seeing these connections between earlier and later learning can help teachers plan curriculum that keeps developmental progressions in mind, creating strong foundations while avoiding a “push-down” approach.

“The Standards define what all students are expected to know and be able to do, not how teachers should teach.”

## A Closer Look—The Common Core State Standards for Kindergarten

With that background, let’s look specifically at the kindergarten standards. Because the English language arts/literacy and mathematics standards were developed by separate groups, they are not organized in the same way. However, both aim to provide clear descriptions of what the most important outcomes are—that is, what children’s understanding and skills should be by the time they leave kindergarten.



## The CCSS for Kindergarten in English Language Arts and Literacy

**The big picture.** Before describing the specific standards, it is important to know what the developers were thinking. They divided the standards into five categories: foundational skills, reading, writing, speaking and listening, and language. The categories are further divided into clusters.

The English language arts and literacy standards are available online at [www.corestandards.org/ELA-Literacy](http://www.corestandards.org/ELA-Literacy).

The table below provides a few sample kindergarten standards. Some of these are probably familiar to you from your own state standards, but others may emphasize different things than you've been used to working on.

<b>Areas/Domains, Clusters, and Sample Kindergarten Standards for English Language Arts and Literacy</b>	
<b>Area/Domain</b>	<b>Cluster Headings/Sample Standards</b>
<b>Foundational Skills</b>	<p><b>Print Concepts</b></p> <p>1. Demonstrate understanding of the organization and basic features of print</p> <p style="padding-left: 20px;">c. Understand that words are separated by spaces in print</p> <p><b>Phonological Awareness</b></p> <p>2. Demonstrate understanding of spoken words, syllables, and sounds (phonemes)</p> <p style="padding-left: 20px;">c. Blend and segment onsets [the part of the word before the vowel] and rimes [the vowel and what follows it] of single-syllable spoken words</p> <p><b>Phonics and Word Recognition</b></p> <p>3. Know and apply grade-level phonics and word analysis skills in decoding words</p> <p style="padding-left: 20px;">c. Read common high-frequency words by sight (e.g., <i>the, of, you, she, my, is, are, do, does</i>)</p> <p><b>Fluency</b></p> <p>4. Read emergent-reader texts with purpose and understanding</p>
<b>Reading (RL and RI):</b> Reading (same clusters for literature [RL] and informational text [RI]. Some items are repeated.)	<p><b>Key Ideas and Details</b></p> <p><b>RL 3.</b> With prompting and support, identify characters, setting, and major events in a story</p> <p><b>RI 3.</b> With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text</p> <p><b>Craft and Structure</b></p> <p><b>RL 4.</b> Ask and answer questions about unknown words in a text</p> <p><b>RI 4.</b> With prompting and support, ask and answer questions about unknown words in a text</p> <p><b>Integration of Knowledge and Ideas</b></p> <p><b>RL 9.</b> With prompting and support, compare and contrast the adventures and experiences of characters in familiar stories</p> <p><b>RI 9.</b> With prompting and support, identify basic similarities between two texts on the same topic (e.g., in illustrations, descriptions, or procedures)</p>



Area /Domain	Cluster Headings/Sample Standards
	<p><b>Range of Reading and Level of Text Complexity</b>  <b>RL 10.</b> Actively engage in group reading activities with purpose and understanding  <b>RI 10.</b> Actively engage in group reading activities with purpose and understanding</p>
Writing (W)	<p><b>Text Types and Purposes</b>  <b>1.</b> Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell the 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., <i>My favorite book is...</i>)</p> <p><b>Production and Distribution of Writing</b>  <b>5.</b> With guidance and support from adults, respond to questions and suggestions from peers and add details to strengthen writing as needed</p> <p><b>Research to Build and Present Knowledge</b>  <b>8.</b> With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question</p>
Speaking/Listening (SL)	<p><b>Comprehension and Collaboration</b>  <b>2.</b> Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood</p> <p><b>Presentation of Knowledge and Ideas</b>  <b>6.</b> Speak audibly and express thoughts, feelings, and ideas clearly</p>
Language (L)	<p><b>Conventions of Standard English</b>  <b>1.</b> Demonstrate command of the conventions of standard English grammar and usage when writing or speaking  <b>f.</b> Produce and expand complete sentences in shared language activities</p> <p><b>2.</b> Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing  <b>a.</b> Capitalize the first word in a sentence and pronoun “I”</p> <p><b>Vocabulary Acquisition and Use</b>  <b>5.</b> With guidance and support from adults, explore word relationships and nuances in word meanings  <b>a.</b> Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent</p>

## The CCSS for Kindergarten in Mathematics

**The big picture.** As with the English language arts/literacy standards, let’s begin by understanding the general approach that was taken. The math standards developers based their approach on research about US children’s mathematical competence, and about the deficiencies of many current practices in teaching mathematics. National reports and international comparisons (NRC 2001, 2009) have criticized math curricula that are a “mile wide and an inch deep,” that cover too many topics in a scattered way, and that emphasize rote learning rather than comprehension. Additionally, children have often been expected (and expect themselves) to be “good at” math or not, with schools and families seeing mathematical competence more as a matter of innate ability than as a product of children’s effort and the quality of teaching they receive. For these reasons the emphasis in the CCSS mathematics standards is on:



- Having greater focus and coherence in teaching mathematics
- Defining what children should understand and be able to do
- Giving all children opportunities to learn, including those with disabilities and other characteristics that may have limited their opportunities in the past

**The standards for mathematical practice.** Before presenting the grade-specific content standards, the developers described eight “standards for mathematical practice” that can be thought of as process standards, relevant to all levels of mathematics education. These are

1. Make sense of problems and persevere in solving them
2. Reason abstractly and quantitatively
3. Construct viable arguments and critique the reasoning of others
4. Model with mathematics
5. Use appropriate tools strategically
6. Attend to precision
7. Look for and make use of structure
8. Look for and express regularity in repeated reasoning

Although these may seem beyond the scope of kindergarten, teachers can lay the foundations in engaging ways—for example, Standard 4 can be addressed when children are encouraged to use many different ways to represent real-life problem situations (for example, showing combinations that make the number 5 by using toothpicks, drawing pictures, standing with their friends, and writing numerals). North Carolina’s “unpacking” resource gives rich examples of how to implement the mathematical practice standards in kindergarten, <http://www.dpi.state.nc.us/docs/acre/standards/common-core-tools/unpacking/math/kindergarten.pdf>.

**Kindergarten focus areas.** In addition to the emphasis on standards for mathematical practice, the standards developers recommend that kindergarten mathematics should emphasize two focus areas:

- Representing, comparing, and operating on whole numbers—preferably with real objects
- Describing shapes and space

These topics are certainly familiar to kindergarten teachers like Anna. The difference is that the Common Core gives high priority to these areas, addressing them in greater depth, including attention to sets of critical outcomes within each area.

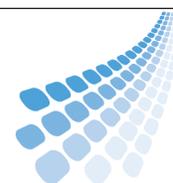
The mathematics standards are available online at [www.corestandards.org/Math](http://www.corestandards.org/Math).

**The specific standards for kindergarten mathematics outcomes.** As shown in the table on the following page, math standards are grouped into five domains: counting and cardinality; operations and algebraic thinking; number and operations in base 10; measurement and data; and geometry. These domains represent the “big ideas,” and each domain includes a group



## Areas/Domains, Clusters, and Sample Kindergarten Standards for Mathematics

Area/Domain	Cluster Headings/Sample Standards
Counting and Cardinality (CC)	<p><b>Know number names and the count sequence</b></p> <p>3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects).</p> <p><b>Count to tell the number of objects</b></p> <p>4. Understand the relationship between numbers and quantities; connect counting to cardinality. [Children understand that each number name refers to one larger than the previous one; the last number name tells how many were counted.]</p> <p style="padding-left: 20px;">a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.</p> <p><b>Compare numbers</b></p> <p>6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group (e.g., by using matching and counting strategies).</p>
Operations and Algebraic Thinking (OA)	<p><b>Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from</b></p> <p>1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.</p> <p>4. For any number from 1 to 9, find the number that makes 10 when added to the given number (e.g., by using objects or drawings) and record the answer with a drawing or equation.</p>
Number and Operations in Base 10 (NBT)	<p><b>Work with numbers 11–19 to gain foundations for place value</b></p> <p>1. Compose and decompose (put together and take apart) numbers from 11 to 19 into ten ones and some further ones (e.g., by using objects or drawings), and record each composition or decomposition by a drawing or equation (e.g., <math>18 = 10 + 8</math>); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.</p>
Measurement and Data (MD)	<p><b>Describe and compare measurable attributes</b></p> <p>2. Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.</p> <p><b>Classify objects and count the number of objects in categories</b></p> <p>3. Classify objects into given categories; count the numbers of objects in each category, and sort the categories by count.</p>
Geometry (G)	<p><b>Identify and describe shapes</b></p> <p>2. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as <i>above</i>, <i>below</i>, <i>beside</i>, <i>in front of</i>, <i>behind</i>, and <i>next to</i>.</p> <p>3. Identify shapes as two-dimensional (lying in a plane, “flat”) or three dimensional (“solid”).</p> <p><b>Analyze, create, compare, and compose shapes</b></p> <p>5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.</p> <p>6. Compose (put together) simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”</p>



of related standards. As in the English language arts/literacy standards, the math standards are grouped into clusters of related standards that logically go together (with one to three clusters in each domain). Each math standard is a statement of what children should typically know and be able to do by the end of kindergarten.

## From What to How: Implementing the Common Core

These summaries show how the Common Core State Standards present the essentials of what children need to know and be able to do by the end of their kindergarten year in the domains of English language arts/literacy and mathematics. However, whether children will make progress in relation to these standards will be strongly influenced by what they experience in their kindergarten program. NAEYC's position statement on developmentally appropriate practice ([www.naeyc.org/positionstatements/dap](http://www.naeyc.org/positionstatements/dap)) gives practical recommendations about the opportunities and teaching methods that are most likely to result in positive outcomes, both in the CCSS domains and in other closely connected components of early development and learning.

*Developmentally Appropriate Practice in Early Childhood Programs Serving Children From Birth to Age 8* and *Basics of Developmentally Appropriate Practice: An Introduction for Teachers of Kindergartners*, both from NAEYC, reiterate and provide new research support for five interrelated elements of high-quality practices in early childhood programs. As kindergarten teachers like Anna begin to think about and implement the CCSS, each of these elements is worth a fresh look with the Common Core in mind.

### 1. Creating a Caring Community of Learners

Relationships are the foundation of learning. With the CCSS in English language arts/literacy and mathematics, as in all other areas, children will make greater progress if they experience warm interactions with adults and spend their days with peers who care about one another. Many of the new Common Core standards are intentionally challenging, but they are achievable when teachers help children develop positive approaches to learning, including interest, initiative, persistence, and self-regulation. These learning behaviors are not inborn, but are developed over time through well-planned experiences at home and in early childhood programs (Hyson 2008).

### 2. Teaching to Enhance Development and Learning

Many of the recommendations within this element of developmentally appropriate practice will directly contribute to children's progress toward the outcomes in the CCSS. For example, a learning environment that encourages exploration, a daily schedule with blocks of time for both active and quiet times, a rich mix of teacher-guided and child-directed experiences, and an emphasis on playful learning will make it possible for kindergartners to benefit from engagement in CCSS-related activities.



### **3. Planning Curriculum to Achieve Important Goals**

To be developmentally appropriate, curriculum should address all areas of development—which reminds teachers that much more is needed than the two CCSS content areas. The emphasis in developmentally appropriate practice on key concepts or “big ideas” in each discipline, and on sequences of skill development within content areas, is consistent with the Common Core’s emphasis on greater depth and focus, especially (but not only) in mathematics. In planning CCSS-related activities, teachers can draw upon NAEYC’s recommendations about connecting curriculum with children’s interests, cultures, and prior experiences. Finally, the discussion of kindergarten curriculum includes many general recommendations in the domains of language and literacy and mathematics—recommendations that are likely to suggest more specific projects and learning activities linked to the CCSS outcomes.

### **4. Assessing Children’s Development and Learning**

States and school districts are working toward developing assessment systems that will help teachers track children’s progress in relation to the Common Core. Two multistate consortia are helping with this task: Smarter Balanced Assessment Consortium and the Partnership for Assessment of Readiness for College and Careers. As this work moves forward, and as teachers like Anna think about their own practices, the recommendations on developmentally appropriate assessment, as well as the recommendations in a joint position statement on assessment (NAEYC & NAECS/SDE 2003), will be helpful. The key recommendation in both documents is that assessment must always be done for specific, beneficial purposes—the most important of which is to help improve teaching and promote children’s learning, not to label or restrict children’s access to later learning opportunities. Comprehensive developmental assessment—with information collected over time with varied, appropriate methods—can give teachers rich insight into each child’s unique characteristics, strengths, and needs.

### **5. Creating Reciprocal Relationships With Families**

The Common Core Standards Initiative intended the standards to help both educators and families understand and support important learning outcomes from kindergarten through the primary grades. With a strong emphasis on respectful relationships and shared responsibility for children’s development, NAEYC’s guidelines on developmentally appropriate practice can help teachers think about how to do this more effectively. As the guidelines emphasize, relationships with families are a two-way street. Teachers can share their understanding of the standards and their plans for helping all children make progress toward those outcomes, but parents and other family members are also valued sources of insight about their children’s interests and strengths, including mathematical knowledge that teachers can tap into in the classroom—and about each family’s goals, hopes, and dreams for their children. All of these insights, together with the four preceding elements of developmentally appropriate practice, help ensure positive results within and beyond the CCSS competencies.



## Returning to Anna and the Common Core— How Can Developmentally Appropriate Practice Help?

With a more specific idea of what the CCSS includes, and with guidance from NAEYC's developmentally appropriate practice framework, let's return to Anna's classroom. How might Anna incorporate the standards into her program in ways that engage the children; respond to their developmental, individual, and cultural needs; and result in solid learning outcomes? Here are some examples, first from English language arts/literacy and then from mathematics.

### Anna, English Language Arts/Literacy, and Developmentally Appropriate Practice

Anna is very confident as a teacher of language arts and she has experienced a lot of high-quality professional development in this area. She is concerned that there are not enough informational books in the classroom library. In the Common Core there is a recommendation of 50 percent narrative and 50 percent informational material. How will she address this need in ways that are consistent with developmentally appropriate practice?

Here are some ideas Anna might think about.

- Organize the classroom library into different areas (e.g., picture books for science and math, picture books for social studies, art books, how-to books, fairy tales, big books) that are interesting and accessible to children, with areas for them to look at the informational books and magazines with their friends. Books can be introduced into other centers as well—for example, books about architecture in the block corner, or books about leaves in the science center.
- Talk to the curriculum coordinator, literacy coach, or principal about how to order more informational magazines. In doing this, Anna keeps in mind the interests, experiences, and cultures of the children, balancing familiar content with new material to pique their interest.
- Help the children with content-specific vocabulary from the informational texts—for example, by using Word Wizards, a child-friendly activity modified from the technique originally developed in the 1980s by Isabel Beck and colleagues and described in detail in the second edition of *Bringing Words to Life: Robust Vocabulary Instruction* (Beck, McKeown, & Kucan 2013). First, Anna can place a Word Wizards poster in an easily accessible location in the classroom. (Some teachers write the words on colored index cards so that the poster can be more or less permanent, though words change over time.) During read-aloud or other occasions when children notice interesting words, teachers select a few words to place on the Word Wizards poster. To be developmentally appropriate, words should be slightly challenging. Make sure that children can decode the word, and explain its meaning (in child-friendly terms) if you have not already done so. When introducing the approach, provide time for children to work in pairs or groups of three to practice using the words in meaningful sentences. Explain that we learn new words through practice, and the poster will provide a way to help us keep



Area/Domain	Cluster/Sample Standards	Sample DAP Approaches and Resources
Foundational Skills	<p><b>Phonological Awareness</b></p> <p>Blend and segment onsets and rimes of single-syllable spoken words</p>	<p><b>Head, Shoulders, Knees, and Toes</b></p> <p>Give children a word with one to four phonemes (sounds). Have them stand up and touch their head, shoulders, knees, and toes as they are saying the sounds in words. For example, the word <i>cat</i> would be /c/ (head), /a/ (shoulders), and /t/ (knees). This is a great active, phonemic-awareness activity for helping children with segmenting, while balancing quiet times with more physically active ones.</p>
Reading: Informational Text (RI)	<p><b>Integration of Knowledge and Ideas</b></p> <p>9. With prompting and support, identify basic similarities between two texts on the same topic (e.g., in illustrations, descriptions, or procedures)</p>	<p><b>Interactive Read-Alouds</b></p> <p>Interactive read-alouds give an opportunity to strengthen relationships between teachers and children. For example, the teacher and children can play Turn and Talk, a widely used strategy to help everyone participate in conversation with a partner and then share their responses: What’s the same about the way these two books tell the story of Little Red Riding Hood? How are the stories different? How are the pictures different, and which do you and your partner like better?</p>
Writing (W)	<p><b>Research to Build and Present Knowledge</b></p> <p>8. With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question</p>	<p><b>Field Trips (e.g., library, farm, museum, store)</b></p> <p><i>What did we learn on our field trip? Can we write or draw something in our journals?</i> Here Anna is connecting the curriculum—and the standards—to children’s prior experiences and interests.</p>
Speaking/Listening (SL)	<p><b>Comprehension and Collaboration</b></p> <p>2. Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood</p>	<p><b>Voice Thread</b></p> <p>Voice Thread (<a href="http://www.voicethread.com">www.voicethread.com</a>) can be used with kindergartners in separate towns, states, and across the world. Young children can ask questions, seek clarification, and communicate online, expanding their caring community of learners beyond their classroom.</p>
Language (L)	<p><b>Vocabulary Acquisition and Use</b></p> <p>5. With guidance and support from adults, explore word relationships and nuances in word meaning.</p> <p>a. Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.</p>	<p><b>Sorting</b></p> <p>Have children sort objects into boxes as they help clean up centers. Anna can scaffold conversation about how these materials are different and how they are the same—while simultaneously addressing math standards related to classification.</p>



new words in mind so we can notice them when they are used. Any time a child hears the word, reads the word in a text, or uses the word appropriately in a sentence when speaking or writing, it receives a tally mark.

Every so often, the teacher should ask a child who adds a tally to the chart to describe or explain how the word was used. At the end of the week, count the tallies and declare one word the winner of the week. (Note that Anna can make this activity do double duty, addressing both literacy and math standards in engaging, developmentally appropriate ways.) Ask a child to take the words down and place them in a word winners box. This box becomes a repository of already-explored vocabulary words and a source of words that might be used for periodic review and classroom-based assessment.

- Engage the children with drawing, labeling, or writing about what they are reading in the informational books in the classroom library (e.g., the moon, snow, their town), Anna might help them write, label, or draw through journals and discussions.

These are just a few ways that Anna can support children’s ability to engage with informational text as specified in one area of the Common Core. The chart on page 105 provides ideas for developmentally appropriate strategies that Anna might use for other, perhaps more challenging standards.

## **Anna, Mathematics, and Developmentally Appropriate Practice**

As someone who has never had a lot of confidence in her math skills, Anna admits to herself that the Common Core standards in math seem intimidating. Of course, her program has always included math. In the past she has used a variety of enjoyable activities, often emphasizing a different math skill each week but without a clear sequence or progression. When Anna learned in district workshops that the Common Core emphasizes a smaller number of focus areas, she was happy to hear that. She decided that this year she would not feel as scattered in her approach to math. With that pep talk, Anna set out to plan experiences likely to give the children she teaches the kind of in-depth understanding that they need.

For example, Anna knows that the domain of geometry is one of the two recommended focus areas for kindergarten. One standard in particular, in the cluster on analyze, create, compare, and compose shapes, is something she’s not thought about much: “Compose simple shapes to form larger shapes. For example, ‘Can you join these two triangles with full sides touching to make a rectangle?’”

How can Anna help children take steps toward this outcome? Anna reminds herself that the standard isn’t the curriculum—she does not have to sit the children down and quiz them about composing shapes. In fact, that is the kind of approach that’s unlikely to lead to understanding, and it might also undermine children’s interest and motivation in learning mathematics.



Guided by her knowledge of developmentally appropriate practices, Anna first thinks about incorporating this standard into experiences that the children already find engaging. Block building is a prime example. Instead of quizzing the children about shapes, Anna begins by watching groups of children as they are building together. She comments on what she sees them doing, and she challenges them to try out new ideas.

She then plans to implement some teacher-guided small group activities with a similar aim—again using children’s existing interests and prior experiences as a springboard. The small group activities will also allow her to assess each child’s knowledge so that she can plan additional experiences accordingly. Her assessment may also include photographs of what the children do with blocks and tangrams (geometric puzzles), resulting in a documentation board with a narrative constructed by Anna and the children (and strengthening CCSS in English language arts/literacy at the same time, while simultaneously promoting social competence as children work collaboratively on the project).

In addition to using block building, Anna plans to give children more in-depth learning opportunities with other materials that can be used to explore putting shapes together and taking them apart. One idea is to offer children small wooden shapes—triangles, squares, and rectangles—that can be put together in many ways. Anna intends to scaffold children’s use of shape language by spending time with the children during this kind of activity. She encourages the children to talk about the shapes and what happens when they put them together. “Look, these two shapes have long sides so they might fit together. What happens when we put them together like this? Can you tell me what you did?” Anna might also create a shape curriculum that organizes the sequential introduction of different types of shapes and different types of activities with them. She sets up these activities to promote collaboration among children and to make adaptations for children like Robbie, who has a visual impairment but who will enjoy and benefit from this activity with support.

This is an example of the powerful array of developmentally appropriate approaches that can support children’s progress on just one Common Core mathematics standard. The chart on the following page shows additional brief examples of developmentally appropriate approaches and resources that Anna might use for other mathematics standards—keeping in mind that multiple experiences, over time, are needed to build understanding and skills.

## Tips for Teachers

The following are seven things that kindergarten and primary grade teachers can do to get ready for the Common Core.

- Take time to read and discuss the Common Core standards, getting as much help as you can to develop a practical understanding of what they mean.
- Review your English language arts/literacy and math curricula to ensure attention to CCSS priorities. What is missing or may need more emphasis?
- Identify developmentally appropriate strategies that will help children make progress toward the CCSS while supporting their holistic development.
- Access in-person and online professional development and other resources related to the Common Core.
- Work collaboratively with other teachers to brainstorm ways to address the more challenging, or newer, Common Core expectations.
- Talk with your curriculum coordinator or math or literacy coach to find appropriate resources (e.g., professional books, children’s books, math manipulatives) related to the language arts and math standards.
- Carefully (and selectively) review what publishers are promoting to address the CCSS. There’s a lot out there, but is it consistent with good early childhood practices?



Area/Domain	Cluster/Sample Standards	Sample DAP Approaches and Resources
<b>Counting and Cardinality (CC)</b>	<p><b>Compare numbers</b></p> <p>6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group (e.g., by using matching and counting strategies).</p>	<p><b>Question of the Day</b></p> <p>On chart paper every morning, Anna writes a question that has two possible answers and then makes two columns on the paper. The question sometimes springs from the previous day’s activity or something the children have been discussing—for example, “Did you walk to school or take the bus?” Children write their names or place an object on the chart, and at group time they work together to count and compare—which is more?</p>
<b>Operations and Algebraic Thinking (OA)</b>	<p><b>Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from</b></p> <p>1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.</p>	<p><b>Putting Families Into a Mural</b></p> <p>As part of a project on families, Anna asks the class to make mural showing each of the children’s families. Within her comprehensive curriculum, Anna will challenge children to first create and cut out a drawing of themselves, and then add other people in their family. She will scaffold children’s ability to do and understand addition by helping them count as they add more family members. Linking to literacy standards, children can also talk about their addition of family members and write a sentence about their family, incorporating some number language. And of course, family-related projects offer ways to develop many social and emotional understandings.</p>
<b>Number and Operations in Base 10 (NBT)</b>	<p><b>Work with numbers 11–19 to gain foundations for place value</b></p> <p>1. Compose (put together) and decompose (take apart) numbers from 11 to 19 into ten ones and some further ones (e.g., by using objects or drawings), and record each composition or decomposition by a drawing or equation [Note: kindergarten children should know what equations look like, but aren’t expected to write equations] (e.g., <math>18 = 10 + 8</math>); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones (separate into a group of ten objects, with leftovers).</p>	<p><b>Nineteen Little Teddy Bears</b></p> <p>Anna knows that her children are not ready to tackle place value this early in the year. She’s building the foundation with activities like singing “Ten Little Indians” (but substituting teddy bears, dinosaurs, or bumblebees) using 11, 12, 13, etc. instead of 1–10. Her children love to sing together and they do this in Spanish as well as English. Anna also gives the children counting chips to put into a ten-frame, predicting whether they will all fit and having them set aside those that are left over when all the spaces in the ten-frame are filled. (North Carolina’s unpacking resource has more examples and tips; see p. 112.)</p>



Area/Domain	Cluster/Sample Standards	Sample DAP Approaches and Resources
Measurement and Data (MD)	<p><b>Classify objects and count the number of objects in categories</b></p> <p><b>3.</b> Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.</p>	<p><b>Our Leaf Book</b></p> <p>Anna has always used lots of classification activities with the children she teaches. This year she will be more intentional in discussing children’s classifications with them and supporting them as they count the objects in each category. She plans to build more classification experiences into the art center (such as classifying collage paper by color or texture and counting how many in each category) and into some outdoor activities (classifying leaves by type, shape, or color and counting how many in each category). Again linking with literacy standards, children will be making class books with written descriptions of what they have found outdoors.</p>
Geometry (G)	<p><b>Identify and describe shapes</b></p> <p><b>2.</b> Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as <i>above, below, beside, in front of, behind, and next to</i>.</p>	<p><b>Shapes at Home</b></p> <p>Anna plans to use the children’s work on this standard to make home–school connections. Children will take a card home asking them to engage their family in finding an object with a particular shape and describing where it was found, using some position words (“We found a round plate in the kitchen. It was next to a cup.”) Children will report on their home objects in group time and will create drawings to illustrate what they found.</p>

## Multiplying the Benefits by Connecting Language/Literacy and Mathematics

So far we have discussed the two Common Core domains separately. However, Anna, Rochelle, and other teachers will find the benefits multiply when language/literacy and math are treated as partners and not as rivals for attention. “Math education is (in part) education in language and literacy” (Ginsburg, Boyd, & Sun Lee 2008, 4). For example, children who participated in one math curriculum not only gained better math knowledge but also better oral language skills than a comparison group (Sarama et al. 2012). In a supportive environment, children’s language and literacy development can be enriched through mathematics and vice versa. Think about the way that interesting math projects can encourage children to talk together, using new words and challenging themselves to describe what they are doing. (Cara says, “Look, Eli, I put these two triangles together like this and made a square.” “Cool!” Listening in, Cara’s teacher might help her make a drawing of the block design and write a sentence about how she made the square.) When kindergarten teachers promote rich vocabulary of all kinds, they are helping children—especially dual language learners or those living in poverty—in all areas of their development, including the important ability to explain their mathematical reasoning (Pappas, Ginsburg, & Jiang 2003).

Although children need focused math experiences, other parts of the kindergarten schedule can expand the number of scaffolds for math and literacy.



Book-reading time is a great opportunity to strengthen children’s interest and skill in both domains. Not only math books, but almost any storybook or informational book gives an opportunity to explore math concepts and apply mathematical practices: “How many ducks are on the boat now? Which is first and which is last? Are there more than there were on the page we just read? How would we find out? I wonder whether there will be more ducks on the next page: What do you think?” And finally, kindergarten teachers can use the power of play to further integrate learning across literacy and mathematics. In play, especially pretend play, children are motivated to stay engaged in and persist at challenging tasks—including mathematical challenges—and to use richer, more elaborate language. Making time for in-depth playful learning experiences pays off in every way (Bodrova & Leong 2003), within and far beyond the Common Core.

## Taking Action—For Yourself, Young Children, and Others

The Common Core State Standards are here. Whether you are a kindergarten teacher like Anna, a preschool teacher like Rochelle, an administrator, or a professional development provider, these new expectations will surely affect your work in the years to come. As an intentional, empowered professional, there’s much you can do to ensure that the CCSS become a positive component of quality early childhood programs and policies.

**If you work in a kindergarten/primary setting**, review the “Tips for Teachers” on page 107 and try implementing those that meet your needs the most. What will help build your knowledge, confidence, and competence to effectively integrate the new expectations into your practice? What will make you better informed and thoughtfully critical?

**If you work with younger children**, you, too, need to familiarize yourself with the CCSS. Through your NAEYC Affiliate and online resources (see p. 111), stay informed about steps being taken in your state or district to align early learning guidelines and other prekindergarten expectations with the Common Core. In working with children below kindergarten age, keep reminding yourself and others that “aligning” early learning guidelines with the Common Core should not mean pushing down standards that are supposed to apply to older children. Instead, your responsibility is to lay strong developmental foundations for later mastery of concepts and skills, and to provide children with the positive approaches to learning that will help them tackle challenging standards with enthusiasm, persistence, and initiative.

**Whatever your early childhood role**, take responsibility to advocate for developmentally appropriate implementation and integration of CCSS expectations into early childhood programs and policies. NAEYC’s new resources ([www.naeyc.org/topics/common-core](http://www.naeyc.org/topics/common-core)) can help you communicate with policy makers, education leaders, and others as a knowledgeable professional who is prepared to describe the place of the CCSS within a holistic early childhood context.



Achieving these outcomes won't be easy, but everything is easier as a team. You and your colleagues can take the next steps together—for yourselves, the children you teach, and others with a stake in the Common Core.

## Online Resources for the Common Core State Standards

These resources provide greater understanding, practical knowledge, and advocacy tools for implementing the Common Core State Standards.

### **ASCD: A Whole Child Approach to Education and the CCSS Initiative**

[www.ascd.org/ASCD/pdf/siteASCD/policy/CCSS-and-Whole-Child-one-pager.pdf](http://www.ascd.org/ASCD/pdf/siteASCD/policy/CCSS-and-Whole-Child-one-pager.pdf)

ASCD (formerly the Association for Supervision and Curriculum Development) has adopted the “whole child approach” as a key component of its mission, not just for kindergarten but across all grades. This brief summarizes ASCD’s position on the value of the CCSS initiative, but points out important issues to consider when schools try to implement the CCSS within a whole child framework.

### **CCSS for Kindergarten in English Language Arts/Literacy and Math**

[www.corestandards.org](http://www.corestandards.org)

This link takes you to the CCSS home page, where you can download the kindergarten standards in literacy and math. The documents also include helpful explanations about what the Common Core standards are and are not.

### **Common Core Curriculum Maps**

[www.commoncore.org/maps/](http://www.commoncore.org/maps/)

These were developed independently from the CCSS work, but they align closely with the CCSS. They may be downloaded, grade by grade, for a membership fee, or they may be purchased from the publisher. The first volume covers grades K–5.

### **Learning Progressions Frameworks Designed to Be Used With the Common Core**

Developed by Karin Hess of the National Center for the Improvement of Educational Assessment and teams of content experts, these documents describe specific learning targets aligned with the Common Core, and the research behind each.

English Language Arts and Literacy: [http://www.naacpartners.org/publications/ELA\\_LPF\\_12.2011\\_final.pdf](http://www.naacpartners.org/publications/ELA_LPF_12.2011_final.pdf)

Mathematics: [http://www.nciea.org/publications/Math\\_LPF\\_KH11.pdf](http://www.nciea.org/publications/Math_LPF_KH11.pdf)

### **NAEYC’s Developmentally Appropriate Practice Position Statement**

[www.naeyc.org/positionstatements/dap](http://www.naeyc.org/positionstatements/dap)

The position statement describes specific practices, including those specifically for kindergarten, that help children learn in ways suited to their developmental, individual, and cultural characteristics.



### **New Jersey Kindergarten Implementation Guidelines**

[www.state.nj.us/education/ece/guide/KindergartenGuidelines.pdf](http://www.state.nj.us/education/ece/guide/KindergartenGuidelines.pdf)

Not specifically aligned with the CCSS, but a good guide to methods that combine active, playful learning with careful attention to content.

### **New Jersey Teacher Practices Related to Common Core State Standards for English Language Arts and Mathematics**

English language arts and literacy: [www.state.nj.us/education/ece/k/lal.pdf](http://www.state.nj.us/education/ece/k/lal.pdf)

Mathematics: [www.nj.gov/education/ece/k/math.pdf](http://www.nj.gov/education/ece/k/math.pdf)

These documents give kindergarten teachers practical support as they try to address the CCSS in developmentally appropriate ways, whether in New Jersey or elsewhere. This is not a curriculum, but suggests ways to emphasize the standards' outcomes within many everyday activities.

### **North Carolina Department of Public Instruction Resources**

<http://www.dpi.state.nc.us/docs/acre/standards/common-core-tools/unpacking/math/kindergarten.pdf>

North Carolina has developed wonderfully helpful instructional support tools, including “unpacking” documents that explain the underlying rationale and content of the CCSS, grade by grade, with suggestions for teaching strategies. The resources include an unpacking of the eight mathematical practices with kindergartners in mind.

Like some other states, North Carolina also “crosswalks” the Common Core with its state standards and provides other resources for teachers: <http://mcpublicschools.org/acre/standards/common-core-tools/>.

### **State Consortia to Support High Quality Assessment for the Common Core**

PARCC: [www.parcconline.org/achieving-common-core](http://www.parcconline.org/achieving-common-core)

Smarter Balanced: [www.smarterbalanced.org/k-12-education/common-core-state-standards-tools-resources/](http://www.smarterbalanced.org/k-12-education/common-core-state-standards-tools-resources/)

The Partnership for Assessment of Readiness for College and Careers (PARCC) and Smarter Balanced Assessment Consortium are two groups that are helping states develop high-quality assessment systems related to the Common Core. They are committed to using assessment to support educators, improve instruction, and help all students succeed.

### **YouTube and the CCSS**

[www.youtube.com/watch?v=RmLElb7yH DU](http://www.youtube.com/watch?v=RmLElb7yH DU)

This link will take you to many presentations that are designed to help educators understand and implement the CCSS. They vary in quality and appropriateness for kindergarten but are worth browsing. There is even a CCSS song ([www.youtube.com/watch?v=X0mKVKxhMpQ](http://www.youtube.com/watch?v=X0mKVKxhMpQ))!

### **Vermont Department of Education Common Core Tools**

[ve2.vermont.gov/](http://ve2.vermont.gov/)

This is an example of one state's development of useful tools for teachers.

