

# Core Knowledge Sequence

Content and Skill Guidelines for Grades K–8



**Core Knowledge<sup>®</sup>**



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A Letter from  
the Founder

## A Letter from the Founder of the Core Knowledge Foundation, E. D. Hirsch, Jr.

March, 2010

Dear Friend of Core Knowledge,

The Board of Trustees of the Core Knowledge Foundation has long desired to make the *Core Knowledge Sequence* freely available for all non-commercial use. Frankly, what has held us back is simple economics. Even nonprofits need to pay bills, and the *Sequence*, our guide to the specific knowledge that forms the foundation of a sound, well-rounded education, has long been our biggest seller. Income from its sale allows us to break even so we can continue to advocate for a solid elementary curriculum and support a growing network of Core Knowledge schools.

While Core Knowledge is still worried about breaking even, times have changed. Today, more people recognize that a core curriculum is critical to significant educational improvement. Growing acceptance of our fundamental proposition is now being evidenced in the promising decision of several states to get behind a common core of K–12 standards in language arts and math. It would be contrary to our basic mission if we did not try to help this promising new effort prosper and succeed.

From its founding in 1986, Core Knowledge has worked to help teachers and parents understand that all of our most important goals in education—reading comprehension, language competence, and critical thinking—depend on broad knowledge, and cannot be successfully attained through language-arts instruction alone. To their credit, the authors of our emerging common core state standards understand this concept. However, standards alone are not sufficient to guarantee success. The effectiveness of the new language-arts standards will depend on the implementation of coherent, cumulative, and content-specific grade-by-grade curricula infused into language arts *and* the other subjects.

So the question has become not how can we give away our most valuable publication and foundational piece of intellectual property, but *how can we not?*


In the old sailing days you had to wait for the flood tide before setting forth, so you didn't miss the tide. That, according to Shakespeare, was true for more than sea voyages:

*There is a tide in the affairs of men,  
Which, taken at the flood, leads on to fortune;  
Omitted, all the voyage of their life  
Is bound in shallows and in miseries.*

Or as Will Rogers put it: "Even though you are on the right track, you will get run over if you just sit there."

For those of you who are old hands on this voyage, thank you for your support throughout the years. If you are new to Core Knowledge, welcome aboard. I have never been more optimistic about the prospect for deep, meaningful, and lasting change in our schools.

Sincerely,



E. D. Hirsch, Jr.

## Preface to the 2010 Edition of the *Core Knowledge Sequence*

With the prospect that many states will soon embrace a common core of K–12 standards in language arts and math, the future of the American public education system has never looked brighter than right now.

We at the Core Knowledge Foundation fervently believe that our experience over the past twenty years in championing the use of a coherent, cumulative, content-specific curriculum in schools throughout the United States can be of significant value to states and school districts nationwide looking to take the next step forward at this historic moment. The integration of common core standards in language arts and math with a coherent, cumulative, and content rich curriculum holds enormous promise. The Core Knowledge Foundation stands ready to assist states, school districts, and individual schools in taking this step and it is for that very reason that we have decided to disseminate the *Core Knowledge Sequence* as widely as possible at no cost.

We offer then this updated, 2010 online version of the *Core Knowledge Sequence*. Our original mission—Excellence and Equity for All Children—and the simple, yet powerful underlying premise of Core Knowledge, that knowledge builds on knowledge, remain unchanged. Nearly all of our most important goals for education—greater reading comprehension, the ability to think critically and solve problems, even higher test scores—are a function of the depth and breadth of our knowledge. Although current events and technology are constantly changing, there is a body of lasting knowledge and skills that form the core of a strong Preschool through Grade 8 curriculum. Explicit identification of what children should learn at each grade level ensures a coherent approach to building knowledge across all grade levels, making efficient and effective use of instructional time. Every child should learn the fundamentals of science, basic principles of government, important events in history, essential elements of mathematics, widely acknowledged masterpieces of art and music from around the world, and stories and poems passed down from generation to generation.

Over the past 20 years, we have been able to refine and fine tune the implementation of Core Knowledge, thanks to the effort and feedback of thousands of teachers and schools who have put the *Core Knowledge Sequence* into practice *in real classrooms with real students*. We have attempted to reflect our increased wisdom with regard to effective implementation in this 2010 edition of the *Sequence*.

### What's New in the 2010 Edition?

We call your attention specifically to the following revisions.

- **Preschool and K–8 Guidelines in a Single Document**

The *Core Knowledge Sequence* for grades 1–5 was first released in 1988. The addition of kindergarten and the middle school grades soon followed, resulting in a single document known as the *Core Knowledge Sequence for K–8*, which is now in its ninth printing. In 1997, the Foundation published the *Core Knowledge Preschool Sequence* as a separate document that offered a coherent approach to teaching 3- to 5-year olds the specific content and skills that lay the foundation for future learning. The Core Knowledge Preschool program has flourished in its own right since that time.

By combining the *Preschool Sequence* with the K–8 guidelines, the Foundation is reasserting its firm commitment to a fully coherent approach to education that we believe is most effective when started at the earliest possible age.

The two-page spread “Core Knowledge at a Glance” in this document graphically displays an overview of this coherence across the grade levels.

- **Explicit Integration of Content and Skills**

In the early years, in order to distinguish ourselves from other education reform efforts and approaches that focused on process over subject-specific content, we identified the *Core Knowledge Sequence* as a “set of content guidelines.” Core Knowledge and the Core Knowledge Foundation became synonymous with content among knowledgeable educators. However, as sometimes happens, some began to portray Core Knowledge as an “either/or” proposition, i.e., if you were using Core Knowledge, you were focused only on content, not skills. Of course, nothing could be further from the truth. As successful Core Knowledge schools have always known, Core Knowledge is more accurately described as a “both/and” proposition: effective Core Knowledge teachers know that both content and skills are essential; they embed the teaching of critical skills within the content they share with their students. The skill objectives are most effectively targeted when they are anchored to the content in the context of a domain of knowledge. To that end, you will notice that we are now explicitly referring to the *Core Knowledge Sequence* as “Content and Skill Guidelines” for preschool–grade 8.

- **Increased Elaboration of the K–2 Language Arts Section of the *Sequence***

After many years of hoping that commercial textbook publishers would heed the cognitive science findings and insights about the link between reading comprehension and background knowledge and create new instructional materials for the teaching of reading, the Core Knowledge Foundation made the decision five years ago to raise the funds necessary to develop its own set of language arts materials. To date, we have created and field-tested comprehensive materials for grades K–2 that represent a revolutionary new approach to language arts instruction.

While these materials, the *Core Knowledge Language Arts (CKLA)* program, are not yet available for widespread sale, we have included the *CKLA* goals and objectives for kindergarten–grade 2 in this 2010 edition of the *Core Knowledge Sequence* (see Appendix C, “Domains and Core Content Objectives for the *Core Knowledge Language Arts* Program, K–2”). These goals and objectives represent our best insights into what effective language arts instruction should encompass—a broader view of “language” within the language arts block, the coherent integration of rich content, i.e., nonfiction, within the language arts block, and explicit, systematic instruction in phonics. Each of these points is further elaborated below and on the following page because we believe they are critical to realizing the full potential of the Core Knowledge program.

See the *Core Knowledge Language Arts* Program on our website for more complete information.

- **A Broader View of Language—Listening, Speaking, Reading, and Writing**

Shortly after a baby is born, an amazingly complex, interactive communication process begins between the infant and others in the child’s environment. Listening and speaking are the primary means of communication during the early years of a child’s development. It is important to understand that future reading and writing competencies are predicated on competencies in listening and speaking. Traditional language arts instruction has typically paid little attention to listening and speaking. This failure to focus on the development of oral language in language arts instruction is a serious oversight. The ability to read and write written language is highly correlated with students’ oral language proficiency and the ability to understand a text read aloud is a prerequisite for making sense of the same text in printed form. By listening to written text read aloud, children can experience the complexities of written language without expending cognitive energy on decoding. By then participating in rich, structured conversations with an adult following the read aloud, children are able to orally practice comparing, analyzing, and synthesizing ideas in written text in much the same way as they will be expected to do as independent readers in later grades. The decided advantage of this approach is that children are building these competencies in the

very early grades, instead of waiting for their own reading skills to evolve. This is especially true for those children who start school, for whatever reasons, with less experience with printed text. (See *Hart & Risley, The Early Catastrophe: The 30 Million Word Gap by Age 3* on our website.)

We are long past due the need to recognize that early language disadvantage persists and manifests itself as illiteracy when educational practices in elementary education fail to recognize the importance of oral language. It is essential that children build listening and speaking competency while also developing reading and writing skills.

See Appendix A, “Why Listening and Learning are Critical to Reading Comprehension,” for a further elaboration of why oral language is important and how the language arts block can be reconceptualized to develop listening and learning skills.

- **Coherent Integration of Content Within the Language Arts Block**

While various reading approaches are increasingly including nonfiction selections within the language arts block and textbook publishers are paying greater attention to reading in the content areas, they have typically failed to grasp the importance of developing a coherent approach to building knowledge within grades and across grade levels. Children hear and/or read about dinosaurs one day, the five senses the next time a nonfiction selection is presented, and Native Americans in the next unit. The selected texts have nothing in common except that they are nonfiction. This random approach to content area reading fails to recognize how domain knowledge builds either within a grade or cumulatively across grade levels. Incorporating nonfiction into language arts in this way is a missed opportunity and a waste of precious instructional time.

Nonfiction selections that are integrated into the language arts block must be presented in a coherent, nonfragmented way. In developing the *CKLA* materials, we have used the grade specific topics in history, science, music, and the arts from the *Core Knowledge Sequence* as the basis of our selections, thereby maintaining the content coherence that has been an integral part of Core Knowledge for the past 20 years. It has also been our experience in field testing *CKLA*, that nonfiction selections should focus on a single topic or domain over a sustained period of time—about two weeks—rather than intermingle selections on unrelated topics.

See Appendix A, “Why Listening and Learning are Critical to Reading Comprehension,” Appendix B, “Using Trade Books to Achieve College and Career Readiness: The Principles of Democracy,” and Appendix C, “Domains and Core Content Objectives for the *Core Knowledge Language Arts* Program, K–2,” for a detailed explanation of how to effectively and coherently incorporate content in the language arts block.

- **Explicit and Systematic Phonics Instruction**

The Core Knowledge Foundation has long advocated the importance of explicitly and systematically teaching young children the phonemic awareness and phonics skills necessary to decipher the written code. It is important that as teachers work to more intentionally include content within the language arts block, they not lose sight of the importance of teaching specific decoding skills, especially in the early grades. The *CKLA* materials use a synthetic phonics approach that has proven to be very effective in early field testing. The 2010 edition of the *Sequence* includes the grade specific decoding skills that are the focus of the *CKLA* materials for K–2. We plan to start development of *CKLA* materials for grades 3–5 in the near future and will post revised language arts goals for these grades as part of the online *Sequence* as soon as they are available.

The specific sequence of consonant and vowel sounds and spellings included in the *Sequence* at each grade level, K–2, represents what is taught in *CKLA* and is unique to

the *CKLA* materials. Until such time as these materials are available for sale, it may be difficult for schools to reproduce the teaching of this exact sequence of phonics skills at the designated grade levels. In the interim, we urge schools to use other materials that explicitly and systematically teach the same consonant and vowel sounds and spellings over the course of K–2, although when certain sounds and spellings are introduced may differ. See “Reading Program Recommendations” on our website for our suggestions as to which existing, commercially available materials do use a systematic and explicit approach to teaching phonics; despite the claims to include phonics, many, many basal reading programs do not do so in a systematic way.

### **What Support is Available for Implementation of Core Knowledge?**

The Core Knowledge Foundation is ready and able to assist states, districts, and individual schools who want to join the ranks of those who are successfully implementing Core Knowledge. The newly revised Core Knowledge website ([www.coreknowledge.org](http://www.coreknowledge.org)) offers a wealth of information on how to get started, support materials and professional development (also, see Appendix D, “Core Knowledge Grade-by-Grade Resource Recommendations” in this document) as well as many free online resources. Be sure to check out the new [online search engine](#) that will allow you to search for lesson plans on Core Knowledge topics!

**Please do not hesitate to also contact us directly by phone (434-977-7550) or by e-mail: ([coreknow@coreknowledge.org](mailto:coreknow@coreknowledge.org)).**

# Introduction

## WHAT IS THE *CORE KNOWLEDGE SEQUENCE*?

The *Core Knowledge Sequence* is a detailed outline of specific content and skills to be taught in language arts, history, geography, mathematics, science, and the fine arts. As the core of a school's curriculum, it is intended to provide a coherent, content specific foundation of learning, while allowing flexibility to meet local needs.

The *Sequence* represents an effort to describe and state the *specific* core of shared knowledge that all children should learn in U.S. schools, and that speakers and writers assume their audience knows. It should be emphasized that the *Core Knowledge Sequence* is not a list of facts to be memorized. Rather, it is a guide to *coherent content* from grade to grade, designed to encourage *cumulative* academic progress as children build their *knowledge and skills* from one year to the next.

The *Core Knowledge Sequence* is distinguished by its specificity. While other standards provide general guidelines concerning what students should be able to do, they typically offer little help to teachers in detailing specific content or skills. The *Sequence* provides a solid foundation on which to build instruction. Moreover, because the *Sequence* offers a coherent plan that builds year by year, it helps prevent the many repetitions and gaps in instruction that often result from vague curricular guidelines.

## TEACHING THE *CORE KNOWLEDGE SEQUENCE*

*“Students will comprehend, evaluate, and respond to works of literature and other kinds of writing which reflect their own cultures and developing viewpoints as well as those of others, using prior knowledge to extend reading ability and comprehension.”*

This language arts standard is fairly typical of many performance standards. It is broad enough that disagreement is difficult—students *should* be able to comprehend, evaluate and respond to works of literature—but offers little help to teachers in planning units and lessons.

Standards typically describe what students should be able to do, but not what students should know. The content-rich, thoughtfully designed *Core Knowledge Sequence* complements state standards by offering a concrete curriculum to guide teaching and learning. Instead of spending hours researching and planning what to teach, teachers are freed to think more creatively about how to teach. They know what children have learned in previous grades and what they will need in succeeding grades. They can avoid useless repetition. They are less likely to be confronted by big gaps in what students have learned.

## THE *SEQUENCE* AS THE CORE OF THE CURRICULUM

The *Core Knowledge Sequence* is not meant to outline the whole of a school's curriculum, but rather to provide a coherently organized plan for content and skills instruction, while remaining flexible enough to not exclude locally determined or other required content and skills.

Effective Core Knowledge teachers recognize that topics from the *Sequence* must not be eliminated or changed from one grade level to another. The topics in the *Sequence* have been carefully chosen to ensure educational equity. We want all students, advantaged and disadvantaged alike, to share in the common knowledge that can lead to success. “Picking and choosing” elements of the *Sequence*

or taking out topics can lead to the very inequities we wish to avoid. Core Knowledge is an integrated and sequenced curriculum that builds over time. Leaving out some of the building blocks will inevitably weaken the foundation for future learning. The Core Knowledge *Day-by-Day Planner* was designed to assist teachers in pacing and planning all topics on a given grade level, while providing a format in which you can add locally determined or other required content and skills. See Appendix D, “Core Knowledge Grade-by-Grade Resource Recommendations.”

## THE CONSENSUS BEHIND THE *CORE KNOWLEDGE SEQUENCE*

The *Core Knowledge Sequence* is the result of a lengthy and rigorous process of research and consensus-building undertaken by the Core Knowledge Foundation, an independent, nonpartisan, nonprofit organization dedicated to excellence and fairness in early education.

To achieve a consensus on the topics to be included in the *Core Knowledge Sequence*, in 1986, the Foundation first analyzed the many reports issued by state departments of education and by professional organizations, such as the National Council of Teachers of Mathematics and the American Association for the Advancement of Science, which recommend general outcomes for elementary and secondary education. We also examined the knowledge and skills specified in the successful educational systems of several other countries, including France, Japan, Sweden, and Germany.

In addition, we formed an advisory board on multiculturalism that proposed the inclusion of diverse cultural traditions that American children should all share as part of their school-based common culture. We sent the resulting materials to three independent groups of teachers, scholars, and scientists around the country, asking them to create a master list of the core knowledge children should have learned by the end of the grade 6. About 150 teachers, including college professors, scientists, and administrators, were involved in this initial step.

These items were combined into a draft *Sequence*, and additional groups of teachers and specialists were asked to agree on a grade-by-grade sequence of the items. That draft sequence was then sent to some 100 educators and specialists who participated in a national conference that was called to hammer out a working agreement on core knowledge for the first six grades; kindergarten, grades 7 and 8, and preschool were subsequently added to the *Sequence*.

This important meeting took place in March 1990. The conferees were elementary school teachers, curriculum specialists, scientists, science writers, officers of national organizations, representatives of ethnic groups, district superintendents, and school principals from across the country. A total of 24 working groups decided on revisions to the draft sequence. The resulting provisional *Core Knowledge Sequence* was fine-tuned during a year of implementation at a pioneering school, Three Oaks Elementary in Lee County, Florida. Also, the Visual Arts and Music sections of the *Sequence* were further developed based on the research of the Core Knowledge Foundation, with the assistance of advisors and teachers.

Because the *Sequence* is intended to be a living document that provides a foundation of knowledge that speakers and writers assume their audiences know, it has been—and will continue to be periodically updated and revised. In general, however, there is more stability than change in the *Sequence*. (See E. D. Hirsch Jr.’s *Cultural Literacy* for a discussion of the inherent stability of the content of literate culture.)

## EQUAL ACCESS TO KNOWLEDGE PROMOTES EXCELLENCE AND FAIRNESS

Only by specifying the knowledge that all children should share can we guarantee equal access to that knowledge. In our current system, disadvantaged children especially suffer from low expectations that translate into watered-down curricula. In schools teaching the *Core Knowledge Sequence*, however, disadvantaged children, like all children, are exposed to a coherent core of challenging, interesting knowledge. This provides a foundation for later learning, but also makes up the common ground for communication in our diverse society.

All the most successful educational systems in the world teach a core of knowledge in the early grades. As both research and common sense demonstrate, we learn new knowledge by building on what we already know. It is important to begin building foundations of knowledge in the early grades because that is when children are most receptive, and because academic deficiencies in the first eight grades can permanently impair the quality of later schooling.

## MULTICULTURALISM IN THE SEQUENCE

Respect for the diversity in our population is fostered by the subjects specified in the *Core Knowledge Sequence*, which has been reviewed by distinguished scholars in the field of multicultural studies. Some people have urged the Foundation to make a separate listing of multicultural entries in this *Sequence*, but to do so would contradict our embrace of an inclusive, rather than divisive, multiculturalism. As Professor James Comer of Yale University has written in a review of E. D. Hirsch's *Cultural Literacy*,

*... respect for cultural diversity is important but is best achieved when young people have adequate background knowledge of mainstream culture. In order for a truly democratic and economically sound society to be maintained, young people must have access to the best knowledge available so that they can understand the issues, express their viewpoints, and act accordingly.*

The *Core Knowledge Sequence* is designed to provide “access to the best knowledge available,” including significant knowledge of diverse peoples and cultures. For a more detailed discussion of these issues, see E. D. Hirsch's essay, “Toward a Centrist Curriculum: Two Kinds of Multiculturalism in Elementary School” on our website.

## THE ARTS IN THE CURRICULUM

The Core Knowledge Foundation sees the arts not as a peripheral part of the curriculum, but as an essential part of the knowledge all children should learn in the early grades.

Early instruction in the arts should be noncompetitive, and provide many opportunities to sing, dance, listen to music, play act, read and write poetry, draw, paint, and make objects. Equally important, children should be exposed to fine paintings, great music, and other inspiring examples of art. As children progress in their knowledge and competencies, they can begin to learn more about the methods and terminology of the different arts, and become familiar with an ever wider range of great artists and acknowledged masterworks.

Through attaining a basic knowledge of the arts, children are not only better prepared to understand and appreciate works of art, but also to communicate their ideas, feelings, and judgments to others. A good understanding of the arts grows out of at least three modes of knowledge—creative (i.e., directly making artworks), historical, and analytical. Early study of the arts should embrace all three modes with special emphasis on creativity and active participation.

The arts guidelines in the *Core Knowledge Sequence* are organized into two main sections: the Visual Arts and Music. While the *Sequence* does not present other arts such as dance or drama as separate disciplines, we acknowledge their importance and have incorporated them in other disciplines (for example, dance is in Music; drama, in Language Arts).

## CORE KNOWLEDGE SCHOOLS

The Core Knowledge Foundation serves as the hub of a nationwide network of hundreds of Core Knowledge schools. Presentations and workshops are available to introduce Core Knowledge and to assist schools in the implementation of the *Core Knowledge Sequence*. Core Knowledge schools are dedicated to teaching solid academic content and skills to all children. To implement Core Knowledge, many people involved with the school's operations, including both staff and parents, need to engage in a great deal of thoughtful discussion and cooperative planning. Teachers make a commitment to teach all the topics in the *Sequence* at the assigned grade levels. This commitment ensures consistency, and helps avoid serious gaps in knowledge, and repetitions in instruction, as students progress through the grades.

The *Sequence* serves as the planning document in each classroom. Its high level of specificity proves useful not only when planning but also when communicating among staff members and with parents. Core Knowledge schools develop a school-wide plan to teach all of the topics in the *Sequence*. Typically this plan is developed over a period of two to three years, either by phasing in topics and subjects, or by adding additional grade levels each year. The Foundation holds national conferences to provide opportunities for networking with other Core Knowledge schools and obtaining new ideas for teaching the topics in the *Sequence*.

For more information on adopting or implementing the *Core Knowledge Sequence*, including recommended professional development, contact the Core Knowledge Foundation at 434-977-7550 or at [coreknow@coreknowledge.org](mailto:coreknow@coreknowledge.org).

## RESOURCES FOR TEACHING THE CORE KNOWLEDGE SEQUENCE

As an initial introduction to Core Knowledge, teachers and parents may wish to consult the books in the Core Knowledge series, titled *What Your Preschooler–Sixth Grader Needs to Know*, edited by E. D. Hirsch, Jr. The books are available at bookstores nationwide, or they may be ordered from the Core Knowledge Foundation by calling 1-800-238-3233.

Once a decision has been made to implement Core Knowledge, we strongly recommend the purchase of the grade specific *Core Knowledge Teacher Handbook* and the *Day-by-Day Planner*. A grade-by-grade listing of recommended resources for both teachers and students is included in Appendix D.

For a list of current resources and prices, visit the Core Knowledge website at [www.coreknowledge.org](http://www.coreknowledge.org) or contact us directly at:

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home page: [www.coreknowledge.org](http://www.coreknowledge.org)



# GradeK



# Overview of Topics

## Kindergarten

### Language Arts

- I. Listening and Speaking
  - A. Classroom Discussion
  - B. Presentation of Ideas and Information
  - C. Comprehension and Discussion of Read-Alouds—All Texts
  - D. Comprehension and Discussion of Read-Alouds—Fiction, Drama, and Poetry
  - E. Comprehension and Discussion of Read-Alouds—Nonfiction and Informational Text
- II. Reading
  - A. Print Awareness
  - B. Phonological and Phonemic Awareness
  - C. Phonics: Decoding and Encoding
  - D. Oral Reading and Fluency
  - E. Reading Comprehension—All Texts
- III. Writing
- IV. Language Conventions
  - A. Handwriting and Spelling
  - B. Parts of Speech and Sentence Structure
  - C. Capitalization and Punctuation
- V. Poetry
  - A. Mother Goose and Other Traditional Poems
  - B. Other Poems, Old and New
- VI. Fiction
  - A. Stories
  - B. Aesop's Fables
  - C. American Folk Heroes and Tall Tales
  - D. Literary Terms
- VII. Sayings and Phrases

### History and Geography

#### World:

- I. Geography: Spatial Sense
- II. An Overview of the Seven Continents

#### American:

- I. Geography
- II. Native American Peoples, Past and Present

- III. Early Exploration and Settlement
  - A. The Voyage of Columbus in 1492
  - B. The Pilgrims
  - C. July 4, "Independence Day"
- IV. Presidents, Past and Present
- V. Symbols and Figures

### Visual Arts

- I. Elements of Art
  - A. Color
  - B. Line
- II. Sculpture
- III. Looking at and Talking about Works of Art

### Music

- I. Elements of Music
- II. Listening and Understanding
- III. Songs

### Mathematics

- I. Patterns and Classification
- II. Numbers and Number Sense
- III. Money
- IV. Computation
- V. Measurement
- VI. Geometry

### Science

- I. Plants and Plant Growth
- II. Animals and Their Needs
- III. The Human Body
- IV. Introduction to Magnetism
- V. Seasons and Weather
- VI. Taking Care of the Earth
- VII. Science Biographies

## Language Arts: Kindergarten

The *Common Core State Standards for English Language Arts* emphasize the critical importance of building nonfiction background knowledge in a coherent and sequenced way within and across grades. This can be accomplished most effectively, at each grade level, by integrating the topics from history, geography, science, and the arts in the *Core Knowledge Sequence* into the language arts block. Note that in the *Sequence*, there are many cross-curricular connections to history and science topics within Language Arts (e.g., poems, stories, and sayings), as well as to visual arts and music, which can and should be integrated into the applicable domain of study.

**For Kindergarten, domains include:** An Overview of the Seven Continents; Native American Peoples, Past and Present; Early Exploration and Settlement; Presidents, Past and Present; Plants and Plant Growth; Animals and Their Needs; The Human Body; Introduction to Magnetism; Seasons and Weather; Taking Care of the Earth.

**NOTE:** The objectives listed in sections I–IV of Language Arts below are consistent with the *Core Knowledge Language Arts* program and embed all of the skills and concepts within the *Common Core State Standards for English Language Arts*.

### I. Listening and Speaking

**Teachers:** Shortly after a baby is born, an amazingly complex, interactive communication process begins between the infant and others in his/her environment. While it may seem like an obvious statement, it is nonetheless worth making the point that listening and speaking are the primary means of communication throughout the early years of a young child's development. It should be equally obvious that reading and writing competencies are predicated on competencies in listening and speaking. When a child enters kindergarten, however, traditional language arts instruction has typically accorded little, if any, attention to the ongoing development of children's listening and speaking ability. We have acted as if listening and speaking competencies are fully and firmly established and can be left behind, as reading and writing instruction begins. Nothing could be further from the truth. This omission in language arts instruction has been a serious oversight. We must remedy this oversight, deliberately elaborating and extending listening and speaking skills, while we simultaneously begin to introduce reading, and then writing. Children who are fortunate enough to participate in language arts instruction that recognizes the importance of continuing to build listening and speaking competency while also beginning reading and writing instruction will, in the end, be far more literate adults.

#### A. CLASSROOM DISCUSSION

- Participate in age appropriate activities involving listening and speaking.
- Speak clearly with volume appropriate to the setting.
- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say "excuse me" or "please," etc.
- Ask questions to clarify conversations, directions, exercises, and/or classroom routines.
- Carry on and participate in a conversation over four to five turns, staying on topic, initiating comments or responding to a partner's comments, with either an adult or another child of the same age.
- Identify and express physical sensations, mental states, and emotions of self and others.
- Understand and use language to express spatial and temporal relationships (*up, down, first, last, before, after, etc.*).
- Understand and use narrative language to describe people, places, things, locations, events, actions.
- Understand and use common sayings and phrases such as "Better safe than sorry" and "Look before you leap" (see page 11).

**B. PRESENTATION OF IDEAS AND INFORMATION**

- Follow multi-step, oral directions.
- Give simple directions.
- Provide simple explanations.
- Recite a nursery rhyme, poem or song independently.

**C. COMPREHENSION AND DISCUSSION OF READ-ALOUDS—ALL TEXTS**

**Teachers:** Written text makes use of richer vocabulary and more complex syntax than conversational language. It is important that young children be exposed not only to the language of everyday conversation but also to the richer and more formal language of books. This can be done through frequent reading aloud. Helping young children develop the ability to listen to and understand written texts read aloud must be an integral part of any initiative designed to build literacy.

At the kindergarten level, a child's ability to understand what he hears far outpaces his ability to independently read and understand written text. By listening to stories or nonfiction selections read aloud, children can experience the complexities of written language without expending cognitive energy on decoding; they can likewise access deeper and more complex content knowledge than they are presently able to read independently.

Careful consideration should be given to the selection of books read aloud to ensure that the vocabulary and syntax presented is rich and complex. Leveled texts will not provide the rich language experience desired during read-alouds and should only be used as a starting point with students for whom English is a second language.

Grade appropriate read-aloud selections for poetry and fiction are included on pages 9–11. Nonfiction read-alouds should be selected on the basis of the history, science, music and visual art topics identified for kindergartners in the *Core Knowledge Sequence*, with emphasis on history and science read-alouds. It is strongly recommended that daily read-alouds focus on a single topic over a sustained period of time—about two weeks—rather than intermingling read-alouds on a variety of subjects. Careful consideration should be given to the order in which nonfiction read-alouds are presented to ensure that knowledge about a topic builds in a progressive and coherent way.

Following any read-aloud, children should participate in rich, structured conversations with an adult in response to the written text that has been read aloud. In this way, they can begin to orally practice comparing, analyzing, and synthesizing ideas in written text in much the same way as they will be expected to do as independent readers in the later grades.

- Listen to and understand a variety of texts read aloud, including fictional stories, fairy tales, fables, historical narratives, drama, informational text, and poems.

**Grasping Specific Details and Key Ideas**

- Describe illustrations.
- Sequence four to six pictures illustrating events in a read-aloud.
- Answer questions requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc.
- Retell key details.
- Ask questions to clarify information in a read-aloud.
- Use narrative language to describe people, places, things, locations, events, actions, a scene or facts in a read-aloud.

**Observing Craft and Structure**

- Understand and use words and phrases heard in read-alouds.
- Compare and contrast similarities and differences within a single read-aloud or between two or more read-alouds.
- Make personal connections to events or experiences in a read-aloud and/or make connections among several read-alouds.

### Integrating Information and Evaluating Evidence

- Prior to listening to a read-aloud, identify what they know and have learned that may be related to the specific story or topic to be read aloud.
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud.
- Make predictions prior to and during a read-aloud, based on the title, pictures, and/or text heard thus far and then compare the actual outcomes to predictions.
- Answer questions that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering “why” questions that require recognizing cause/effect relationships.
- Identify who is telling a story or providing information in a text.

#### D. COMPREHENSION AND DISCUSSION OF READ-ALOUDS—FICTION, DRAMA, AND POETRY

- Retell or dramatize a story, using narrative language to describe characters, setting(s), and a beginning, a middle and an end to events of the story in proper sequence.
- Change some story events and provide a different story ending.
- Create and tell an original story, using narrative language to describe characters, setting(s), and a beginning, a middle and an end to events of the story in proper sequence.
- Distinguish fantasy from realistic text in a story.
- Demonstrate understanding of literary language (e.g., author, illustrator, characters, setting, plot, dialogue, personification, simile, and metaphor) and use some of these terms in retelling stories or creating their own stories.

#### E. COMPREHENSION AND DISCUSSION OF READ-ALOUDS—NONFICTION AND INFORMATIONAL TEXT

**Teachers:** Select nonfiction read-aloud topics from the kindergarten history, science, music, and visual arts topics listed on pages 12–21, with emphasis on history and science.

- Retell important facts and information from a nonfiction read-aloud.
- With assistance, categorize and organize facts and information within a given topic.
- With assistance, create and interpret timelines and lifelines related to read-alouds.
- Distinguish read-alouds that describe events that happened long ago from those that describe contemporary or current events.

## II. Reading

### A. PRINT AWARENESS

- Demonstrate understanding that what is said can be written and that the writing system is a way of writing down sounds.
- Demonstrate understanding of directionality (left to right, return sweep, top to bottom, front to back).
- Identify the parts of books and function of each part (front cover, back cover, title page, table of contents).
- Demonstrate correct book orientation by holding book correctly and turning pages.
- Recognize that sentences in print are made up of separate words.
- Understand that words are separated by spaces.
- Distinguish letters, words, sentences, and stories.
- Demonstrate understanding of basic print conventions by tracking and following print word for word when listening to text read aloud.
- Demonstrate understanding that the sequence of letters in a written word represents the sequence of sounds in the spoken word.
- Recognize and name the 26 letters of the alphabet in both their upper-case and lower-case forms.

- Say the letters of the alphabet in order, either in song or recitation.

## B. PHONOLOGICAL AND PHONEMIC AWARENESS

- Identify environmental sounds, e.g., keys jingling, scissors cutting, clapping.
- Identify whether pairs of environmental sounds are the same or different.
- Count the number of environmental sounds heard, e.g., clapping, rhythm band instruments.
- Orally segment sentences into discrete words.
- Demonstrate understanding that words are made up of sequences of sounds.
- Demonstrate understanding that vowel sounds are produced with the mouth open and airflow unobstructed, whereas consonant sounds involve closing parts of the mouth and blocking the air flow.
- Given a pair of spoken words, select the one that is longer (i.e., contains more phonemes).
- In riddle games, supply words that begin with a target phoneme.
- Indicate whether a target phoneme is or is not present in the initial/medial/final position of a spoken word, e.g., hear /m/ at the beginning of *mat* and /g/ at the end of *bag*.
- Listen to one-syllable words and tell the beginning or ending sounds, e.g., given *dog*, identify initial /d/ or final /g/.
- Recognize the same phoneme in different spoken words, e.g., /b/ in *ball*, *bug*, and *big*.
- Identify whether pairs of phonemes are the same or different, including pairs that differ only in voicing, e.g., /b/ and /p/.
- Orally blend two to three sounds to form a word, e.g., given the sounds /k/.../a/... /t/, blend to make *cat*.
- Segment a spoken word into phonemes, e.g., given *bat*, produce the segments/b//a//t/.
- Given a spoken word, produce another word that rhymes, e.g., given *hit*, supply *bit* or *mitt*.
- Identify the number of syllables in a spoken word.

## C. PHONICS: DECODING AND ENCODING

**Teachers: Learning to read requires understanding and mastering the written English code through explicit and systematic phonics instruction. Research suggests that phonics instruction is most effective when specific letter-sound relationships are taught and reinforced by having children both read and write the letter-sound correspondence being studied. Reading and writing—decoding and encoding—are complementary processes that ensure mastery of the written code.**

- Demonstrate understanding that a systematic, predictable relationship exists between written letters (graphemes) and spoken sounds (phonemes).
- Blend individual phonemes to pronounce printed words.
- Understand that sometimes two or more printed letters stand for a single sound.
- Read and write any CVC word, e.g., *sit* or *cat*.
- Read and write one-syllable words containing common initial consonant clusters such as tr-, fl-, dr- and sp- and consonant digraphs such as ch-, sh-, th-, etc.
- Read and write words containing separated vowel graphemes, such as, *late*, *bite*, *note*, *cute*.
- Read tricky spellings that can be sounded two ways, e.g., the letter ‘s’ sounded /s/ as in *cats* and /z/ as in *dogs*.
- Read and write chains of one-syllable words in which one sound is added, substituted, or omitted, e.g., read at > cat > bat > bad > bid.
- Read at least 15 words generally identified as very high frequency words.

## CONSONANT SOUNDS AND SPELLINGS TAUGHT IN KINDERGARTEN

/b/ spelled 'b' as in *boy*, 'bb' as in *tubby*  
 /d/ spelled 'd' as in *dog*, 'dd' as in *madder*  
 /f/ spelled 'f' as in *fun*, 'ff' as in *stuff*  
 /g/ spelled 'g' as in *get*, 'gg' as in *egg*  
 /h/ spelled 'h' as in *him*  
 /j/ spelled 'j' as in *jump*  
 /k/ spelled 'c' as in *cat*, 'k' as in *kitten*, 'ck' as in *sick*, 'cc' as in *moccasin*  
 /l/ spelled 'l' as in *lip*, 'll' as in *sell*  
 /m/ spelled 'm' as in *mad*, 'mm' as in *hammer*  
 /n/ spelled 'n' as in *net*, 'nn' as in *funny*  
 /p/ spelled 'p' as in *pet*, 'pp' as in *happy*  
 /r/ spelled 'r' as in *red*, 'rr' as in *earring*  
 /s/ spelled 's' as in *sit*, 'ss' as in *dress*  
 /t/ spelled 't' as in *top*, 'tt' as in *butter*  
 /v/ spelled 'v' as in *vet*  
 /w/ spelled 'w' as in *wet*  
 /x/ spelled 'x' as in *tax*  
 /y/ spelled 'y' as in *yes*  
 /z/ spelled 'z' as in *zip*, 'zz' as in *buzz*, 's' as in *dogs*  
 /ch/ spelled 'ch' as in *chop*  
 /sh/ spelled 'sh' as in *ship*  
 /th/ spelled 'th' as in *thin*  
 /th/ spelled 'th' as in *then*  
 /qu/ spelled 'qu' as in *quick*  
 /ng/ spelled 'ng' as in *sing*, 'n' as in *pink*

## VOWEL SOUNDS AND SPELLINGS TAUGHT IN KINDERGARTEN

/a/ spelled 'a' as in *cat*  
 /e/ spelled 'e' as in *get*  
 /i/ spelled 'i' as in *hit*  
 /o/ spelled 'o' as in *hot*  
 /u/ spelled 'u' as in *but*  
 /ae/ spelled 'a\_e' as in *cake*  
 /ee/ spelled 'ee' as in *bee*  
 /ie/ spelled 'i\_e' as in *bike*  
 /oe/ spelled 'o\_e' as in *note*  
 /ue/ spelled 'u\_e' as in *cute*  
 /er/ spelled 'er' as in *her*  
 /ar/ spelled 'ar' as in *car*  
 /or/ spelled 'or' as in *for*

### D. ORAL READING AND FLUENCY

- Read decodable stories that incorporate the specific code knowledge that has been taught.
- Use phonics skills in conjunction with context to confirm or self-correct word recognition and understanding, rereading as necessary.
- Demonstrate understanding of and use commas and end punctuation while reading orally.
- Read aloud, alone, or with a partner at least 15 minutes each day.

**E. READING COMPREHENSION—ALL TEXTS**

**Teachers:** It is important to recognize that kindergartners are taught only some of the many letter-sound correspondences a reader needs to know to read a wide range of printed material. As a result, many kindergartners will be able to read independently only the simplest written text. At this grade level, mental energy will be primarily directed to the act of reading, i.e., decoding. A focus on the mechanics of decoding is appropriate and desirable at this early stage in the reading process. In kindergarten, attention to reading comprehension should be directed to ensuring a fundamental understanding of what has been read. At this grade level, it will generally be more effective and efficient to devote time to higher level thinking and comprehension skills at the listening and speaking level in response to written texts that are read aloud.

- Demonstrate understanding of simple decodable text after reading independently.

**Grasping Specific Details and Key Ideas**

- Answer questions requiring literal recall and understanding of the details and/or facts (i.e., who, what, where, when, etc.) about a text that has been read independently.
- Retell or dramatize a story, using narrative language to describe characters, setting(s), and a beginning, a middle and an end to events of the story in proper sequence.
- Use narrative language to describe people, places, things, locations, events, actions, a scene or facts from a text that has been read independently.

**Observing Craft and Structure**

- Understand and use words and phrases from a text that has been read independently.

**Integrating Information and Evaluating Evidence**

- Prior to reading, identify what they know and have learned that may be related to the specific story or topic to be read.
- Use pictures accompanying the written text to check and support understanding.
- Make predictions prior to and while reading, based on the title, pictures, and/or text read thus far and then compare the actual outcomes to predictions.
- Identify who is telling a story or providing information in a text.

**III. Writing**

**Teachers:** It is important to recognize that of all the communication skills—listening, speaking, reading, and writing—writing is the most demanding and challenging, especially for kindergartners who are just learning not only the code, but the fine motor skills and letter strokes necessary to put something down on paper. Kindergartners can, however, express themselves in writing by drawing pictures and, as they begin to learn some of the code, copying or writing words, phrases, and sentences.

In addition, students can also participate in shared writing exercises modeled and scaffolded by an adult. The focus in shared writing should be on encouraging the students to verbally express themselves coherently and in complete sentences, as the teacher serves as a scribe.

**Writing to Reflect Audience, Purpose and Task**

- Draw pictures to represent a text that has been heard or read independently.
- Draw pictures to represent a preference or opinion.
- Write narratives, informative and explanatory texts, and offer an opinion through shared writing exercises.
- With assistance, add details to writing.
- Create a title or caption to accompany a picture and/or shared writing.

## IV. Language Conventions

- Form letters, words, phrases and sentences to communicate thoughts and ideas.
- Apply basic spelling conventions.
- Use basic capitalization and punctuation in sentences to convey meaning.

### A. HANDWRITING AND SPELLING

- Hold a pencil with a pincer grasp and make marks on paper.
- Trace, copy, and print from memory the 26 letters of the alphabet accurately in both their upper-case and lower-case forms.
- Write own name.
- Write from left to right, leaving spaces between words, and top to bottom using return sweep.
- Begin to write phonemically plausible spellings for words that cannot be spelled correctly with current code knowledge, e.g., write *bote* for *boat*, *sum* for *some*, *hunee* for *honey*.
- Write words, phrases, and sentences from dictation, applying phonics knowledge.

### B. PARTS OF SPEECH AND SENTENCE STRUCTURE

- Use and understand question words, i.e., what, where, when, who, how.
- Form regular plural nouns by adding 's' or 'es', i.e., dog, dogs, wish, wishes.
- Demonstrate understanding of frequently occurring prepositions, i.e., *to/from*, *in/out*, *on/off*.
- Produce and expand complete sentences orally and in shared writing exercises.

### C. CAPITALIZATION, AND PUNCTUATION

- Capitalize the first word in a sentence, the pronoun *I*.
- Identify and use end punctuation, including periods, question marks, and exclamation points.

## V. Poetry

**Teachers:** Children should be introduced to a varied selection of poetry with strong rhyme and rhythm. Children should hear these rhymes read aloud, and should say some of them aloud. Some rhymes may also be sung to familiar melodies. The poems listed here represent some of the most popular and widely anthologized titles; children may certainly be introduced to more Mother Goose rhymes beyond the selection below. Although children are not expected to memorize the following rhymes, they will delight in knowing their favorites by heart, and will experience a sense of achievement and satisfaction in being able to recite some of the rhymes.

### A. MOTHER GOOSE AND OTHER TRADITIONAL POEMS

A Diller, A Dollar  
 Baa, Baa, Black Sheep  
 Diddle, Diddle, Dumpling  
 Early to Bed  
 Georgie Porgie  
 Hey Diddle Diddle  
 Hickory, Dickory, Dock  
 Hot Cross Buns  
 Humpty Dumpty  
 It's Raining, It's Pouring  
 Jack and Jill  
 Jack Be Nimble  
 Jack Sprat  
 Ladybug, Ladybug  
 Little Bo Peep  
 Little Boy Blue

#### Note Regarding

#### PRESCHOOL Content:

Some of the poems and stories specified here are appropriate for preschoolers. Indeed, one would hope that most preschoolers would come to kindergarten having heard, for example, some Mother Goose rhymes or the story of "Goldilocks and the Three Bears." However, as not all children attend preschool, and as home preparation varies, the *Core Knowledge Sequence* offers a core of familiar rhymes and stories for all kindergarten children. See also the *Core Knowledge Preschool Sequence*, available from the Core Knowledge Foundation.

Little Jack Horner  
 Little Miss Muffet  
 London Bridge Is Falling Down  
 Mary, Mary, Quite Contrary  
 Old King Cole  
 Old Mother Hubbard  
 One, Two, Buckle My Shoe  
 Pat-a-Cake  
 Rain, Rain, Go Away  
 Ride a Cock-Horse  
 Ring Around the Rosey  
 Rock-a-bye, Baby  
 Roses Are Red  
 See-Saw, Margery Daw  
 Simple Simon  
 Sing a Song of Sixpence  
 Star Light, Star Bright  
 There Was a Little Girl  
 There Was an Old Woman Who Lived in a Shoe  
 This Little Pig Went to Market  
 Three Blind Mice

**Note:** The poems listed here constitute a selected core of poetry for this grade. You are encouraged to expose children to more poetry, old and new. To bring children into the spirit of poetry, read it aloud and encourage them to speak it aloud so they can experience the music in the words.

#### **B . OTHER POEMS, OLD AND NEW**

April Rain Song (Langston Hughes)  
 Happy Thought (Robert Louis Stevenson)  
 I Do Not Mind You, Winter Wind (Jack Prelutsky)  
 Mary Had a Little Lamb (Sara Josepha Hale)  
 The More It Snows (A. A. Milne)  
 My Nose (Dorothy Aldis)  
 Rain (Robert Louis Stevenson)  
 Three Little Kittens (Eliza Lee Follen)  
 Time to Rise (Robert Louis Stevenson)  
 Tommy (Gwendolyn Brooks)  
 Twinkle Twinkle Little Star (Jane Taylor)

## **VI. Fiction**

**Teachers:** While the following works make up a strong core of literature, the content of language arts includes not only stories, fables, and poems, but also the well-practiced, operational knowledge of how written symbols represent sounds, and how those sounds and symbols convey meaning. Thus, the stories specified below are meant to complement, not to replace, materials designed to help children practice decoding and encoding skills (see above, II. Reading and III. Writing).

The following works constitute a core of stories for this grade. In kindergarten, these stories are meant to be read-aloud selections. Expose children to many more stories, including classic picture books and read-aloud books. (In schools, teachers across grade levels should communicate their choices in order to avoid undue repetition.) Children should also be exposed to nonfiction prose: biographies, books on science and history, books on art and music, etc. And, children should be given opportunities to tell and write their own stories.

#### **A. STORIES**

The Bremen Town Musicians (Brothers Grimm)  
 Chicken Little (also known as “Henny-Penny”)  
 Cinderella (Charles Perrault)  
 Goldilocks and the Three Bears  
 How Many Spots Does a Leopard Have? (African folktale)

King Midas and the Golden Touch  
 The Legend of Jumping Mouse (Native American: Northern Plains legend)  
 The Little Red Hen  
 Little Red Riding Hood  
 Momotaro: Peach Boy (Japanese folktale)  
 Snow White and the Seven Dwarfs  
 The Three Billy Goats Gruff  
 The Three Little Pigs  
 A Tug of War (African folktale)  
 The Ugly Duckling (Hans Christian Andersen)  
*The Velveteen Rabbit* (Margery Williams)  
 selections from *Winnie-the-Pooh* (A. A. Milne)  
 The Wolf and the Kids (Brothers Grimm)

**B. AESOP'S FABLES**

The Lion and the Mouse  
 The Grasshopper and the Ants  
 The Dog and His Shadow  
 The Hare and the Tortoise

**C. AMERICAN FOLK HEROES AND TALL TALES**

Johnny Appleseed  
 Casey Jones

**D. LITERARY TERMS**

**Teachers:** As children become familiar with stories, discuss the following:

author  
 illustrator

**Note:** Children will read more American folk heroes and tall tales in grade 2.

## VII. Sayings and Phrases

**Teachers:** Every culture has phrases and proverbs that make no sense when carried over literally into another culture. For many children, this section may not be needed; they will have picked up these sayings by hearing them at home and among friends. But the sayings have been one of the categories most appreciated by teachers who work with children from home cultures that differ from the standard culture of literate American English.

A dog is man's best friend.  
 April showers bring May flowers.  
 Better safe than sorry.  
 Do unto others as you would have them do unto you.  
 The early bird gets the worm.  
 Great oaks from little acorns grow.  
 Look before you leap.  
 A place for everything and everything in its place.  
 Practice makes perfect.  
 [It's] raining cats and dogs.  
 Where there's a will there's a way.

# History and Geography: Kindergarten

**Teachers:** In kindergarten, children often study aspects of the world around them: the family, the school, the community, etc. The following guidelines are meant to broaden and complement that focus. The goal of studying selected topics in World History in Kindergarten is to foster curiosity and the beginnings of understanding about the larger world outside the child's locality, and about varied civilizations and ways of life. This can be done through a variety of means: story, drama, art, music, discussion, and more.

The study of geography embraces many topics throughout the *Core Knowledge Sequence*, including topics in history and science. Geographic knowledge includes a spatial sense of the world, an awareness of the physical processes that shape life, a sense of the interactions between humans and their environment, an understanding of the relations between place and culture, and an awareness of the characteristics of specific regions and cultures.

## WORLD HISTORY AND GEOGRAPHY

### I. Geography: Spatial Sense (working with maps, globes, and other geographic tools)

**Teachers:** Foster children's geographical awareness through regular work with maps and globes. Have students regularly locate themselves on maps and globes in relation to places they are studying. Children should make and use a simple map of a locality (such as classroom, home, school grounds, "treasure hunt").

- Maps and globes: what they represent, how we use them
- Rivers, lakes, and mountains: what they are and how they are represented on maps and globes
- Locate the Atlantic and Pacific Oceans.
- Locate the North and South Poles.

### II. An Overview of the Seven Continents

**Teachers:** Help children gain a beginning geographic vocabulary and a basic sense of how we organize and talk about the world by giving names to some of the biggest pieces of land. Introduce children to the seven continents through a variety of methods and media (tracing, coloring, relief maps, etc.), and associate the continents with familiar wildlife, landmarks, etc. (for example, penguins in Antarctica; the Eiffel Tower in Europe). Throughout the school year, reinforce names and locations of continents when potential connections arise in other disciplines (for example, connect Grimm's fairy tales to Europe; voyage of Pilgrims to Europe and North America; story of "Momotaro—Peach Boy" to Asia [Japan]; study of Native Americans to North America).

**Note:** In later grades, children will continue to learn about all the continents as well as specific countries and peoples.

- Identify and locate the seven continents on a map and globe:
  - Asia
  - Europe
  - Africa
  - North America
  - South America
  - Antarctica
  - Australia

## AMERICAN HISTORY AND GEOGRAPHY

**Teachers:** The study of American history begins in grades K-2 with a brief overview of major events and figures, from the earliest days to recent times. A more in-depth, chronological study of American history begins again in grade 3 and continues onward. The term “American” here generally, but not always, refers to the lands that became the United States. Other topics regarding North, Central, and South America may be found in the World History and Geography sections of this Sequence.

## I. Geography

- Name and locate the town, city, or community, as well as the state where you live.
- Locate North America, the continental United States, Alaska, and Hawaii.

## II. Native American Peoples, Past and Present

**Teachers:** As children progress through the grades of the *Core Knowledge Sequence*, they will learn about many different Native American peoples in many different regions (such as **Pacific Northwest:** Kwakiutl, Chinook; **Plateau:** Nez Perce; **Great Basin:** Shoshone, Ute; **Southwest:** Dine [Navajo], Hopi, Apache, Zuni; **Plains:** Blackfoot, Comanche, Crow, Kiowa, Dakota, Lakota [Sioux], Cheyenne, Arapaho; **Eastern Woodlands:** Huron, Iroquois, Mohican, Delaware [Lenni Lenape], Susquehanna, Massachusetts, Wampanoag, Powhatan; **Southeast:** Cherokee, Seminole). In kindergarten, study at least **one** specific group of Native Americans. You might explore a local or regional tribe or nation, and compare it with one far away.

- Become familiar with the people and ways of life of at least one Native American tribe or nation, including:
  - how they lived
  - what they wore and ate
  - the homes they lived in
  - their beliefs and stories
  - the current status of the tribe or nation

## III. Early Exploration and Settlement

## A. THE VOYAGE OF COLUMBUS IN 1492

- Queen Isabella and King Ferdinand of Spain
- The Niña, Pinta, and Santa Maria
- Columbus’s mistaken identification of “Indies” and “Indians”
- The idea of what was, for Europeans, a “New World”

## B. THE PILGRIMS

- The Mayflower
- Plymouth Rock
- Thanksgiving Day celebration

## C. JULY 4, “INDEPENDENCE DAY”

- The “birthday” of our nation
- Democracy (rule of the people): Americans wanted to rule themselves instead of being ruled by a faraway king.
- Some people were not free: slavery in early America



See below, Symbols and Figures: Mount Rushmore; the White House.

#### IV. Presidents, Past and Present

**Teachers:** Introduce children to famous presidents, and discuss with them such questions as: What is the president? How does a person become president? Who are some of our most famous presidents, and what did they do that made them famous?

- George Washington  
The “Father of Our Country”  
Legend of George Washington and the cherry tree
- Thomas Jefferson, author of Declaration of Independence
- Abraham Lincoln  
Humble origins  
“Honest Abe”
- Theodore Roosevelt
- Current United States president

#### V. Symbols and Figures

- Recognize and become familiar with the significance of  
American flag  
Statue of Liberty  
Mount Rushmore  
The White House

# Visual Arts: Kindergarten

SEE INTRODUCTION, “The Arts in the Curriculum.”

**Teachers:** In schools, lessons on the visual arts should illustrate important elements of making and appreciating art, and emphasize important artists, works of art, and artistic concepts. When appropriate, topics in the visual arts may be linked to topics in other disciplines. While the following guidelines specify a variety of artworks in different media and from various cultures, they are not intended to be comprehensive. Teachers are encouraged to build upon the core content and expose children to a wide range of art and artists.

## I. Elements of Art

**Teachers:** The generally recognized elements of art include line, shape, form, space, light, texture, and color. In kindergarten, introduce children to line and color. Engage students in recognizing and using different kinds of lines and colors, and point out lines and colors in nature. (You may also wish to observe shapes in art and nature—see Math: Geometry.)

### A. COLOR

- Observe how colors can create different feelings and how certain colors can seem “warm” (red, orange, yellow) or “cool” (blue, green, purple)
- Observe the use of color in  
 Pieter Bruegel, *The Hunters in the Snow*  
 Helen Frankenthaler, *Blue Atmosphere*  
 Paul Gauguin, *Tahitian Landscape*  
 Pablo Picasso, *Le Gourmet*

### B. LINE

- Identify and use different lines: straight, zigzag, curved, wavy, thick, thin
- Observe different kinds of lines in  
 Katsushika Hokusai, *Tuning the Samisen*  
 Henri Matisse, *Purple Robe and Anemones*  
 Joan Miró, *People and Dog in the Sun*

## II. Sculpture

- Recognize and discuss the following as sculptures:  
 Northwest American Indian totem pole  
 Statue of Liberty
- Mobiles: Alexander Calder’s *Lobster Trap and Fish Tail*

## III. Looking at and Talking about Works of Art

**Teachers:** After children have been introduced to some elements of art and a range of artworks and artists, engage them in looking at pictures and talking about them. Ask the children about their first impressions—what they notice first, and what the picture makes them think of or feel. Go on to discuss the lines and colors, details not obvious at first, why they think the artist chose to depict things in a certain way, etc.

- Observe and talk about  
 Pieter Bruegel, *Children’s Games*  
 Mary Cassatt, *The Bath*  
 Winslow Homer, *Snap the Whip*  
 Diego Rivera, *Mother’s Helper*  
 Henry O. Tanner, *The Banjo Lesson*

See also American History K:  
Native Americans, *re* totem  
pole.

# Music: Kindergarten

SEE INTRODUCTION, “The Arts in the Curriculum.”

**Teachers:** In schools, lessons on music should feature activities and works that illustrate important musical concepts and terms, and should introduce important composers and works. When appropriate, topics in music may be linked to topics in other disciplines.

The following guidelines focus on content, not performance skills, though many concepts are best learned through active practice (singing, clapping rhythms, playing instruments, etc.).

## I. Elements of Music

- Through participation, become familiar with some basic elements of music (rhythm, melody, harmony, form, timbre, etc.).
  - Recognize a steady beat; begin to play a steady beat.
  - Recognize that some beats have accents (stress).
  - Move responsively to music (marching, walking, hopping, swaying, etc.).
  - Recognize short and long sounds.
  - Discriminate between fast and slow.
  - Discriminate between obvious differences in pitch: high and low.
  - Discriminate between loud and soft.
  - Recognize that some phrases are the same, some different.
  - Sing unaccompanied, accompanied, and in unison.

## II. Listening and Understanding

**Teachers:** To encourage listening skills and the beginnings of understanding, play various kinds of music often and repeatedly. In the kindergarten classroom, music can be played for enjoyment, to accompany activities, to inspire creative movement, etc. Expose children to a wide range of music, including children’s music, popular instrumental music, and music from various cultures.

- Recognize the following instruments by sight and sound: guitar, piano, trumpet, flute, violin, drum.
- Become familiar with the following works:
  - Edvard Grieg, “Morning” and “In the Hall of the Mountain King” from *Peer Gynt*
  - Victor Herbert, “March of the Toys” from *Babes in Toyland*
  - Richard Rodgers, “March of the Siamese Children” from *The King and I*
  - Camille Saint-Saëns, *Carnival of the Animals*

## III. Songs

**Teachers:** See also Language Arts, Mother Goose poems. A number of the poems may be sung to familiar melodies.

The Bear Went Over the Mountain  
 Bingo  
 The Farmer in the Dell  
 Go In and Out the Window  
 Go Tell Aunt Rhody  
 Here We Go Round the Mulberry Bush  
 The Hokey Pokey  
 Hush Little Baby  
 If You’re Happy and You Know It  
 Jingle Bells



**Note:** Grieg’s “In the Hall of the Mountain King” is a good work to illustrate dynamics (loud and quiet), as well as tempo (slow and fast).

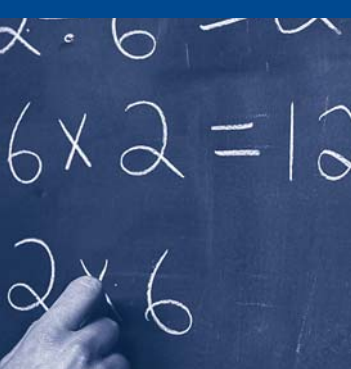
John Jacob Jingleheimer Schmidt  
 Kumbaya (also Kum Ba Ya)  
 London Bridge  
 Old MacDonald Had a Farm  
 Row, Row, Row Your Boat  
 This Old Man  
 Twinkle Twinkle Little Star  
 The Wheels on the Bus

**Teachers:** You may wish to supplement the songs listed above with songs from the *Core Knowledge Preschool Sequence*, as follows:

A Tisket, A Tasket  
 Are You Sleeping?  
 Blue-Tail Fly (Jimmie Crack Corn)  
 Do Your Ears Hang Low?  
 Did You Ever See a Lassie?  
 Eensy, Weensy Spider  
 Five Little Ducks That I Once Knew  
 Five Little Monkeys Jumping On the Bed  
 Happy Birthday to You  
 Head and Shoulders, Knees and Toes  
 Here is the Beehive  
 I Know an Old Lady  
 I'm a Little Teapot  
 Kookaburra  
 Lazy Mary  
 Looby Loo  
 Oats, Peas, Beans and Barley Grow  
 Oh, Do You Know the Muffin Man?  
 Oh Where, Oh Where, Has My Little Dog Gone?  
 One Potato, Two Potato  
 Open, Shut Them  
 Pop Goes the Weasel  
 Teddy Bear, Teddy Bear, Turn Around  
 Teddy Bears Picnic  
 Where is Thumbkin?  
 Who Stole the Cookie from the Cookie Jar?  
 You Are My Sunshine

# Mathematics: Kindergarten

**Teachers:** Mathematics has its own vocabulary and patterns of thinking. It is a discipline with its own language and conventions. Thus, while some lessons may offer occasional opportunities for linking mathematics to other disciplines, it is critically important to attend to math as math. From the earliest years, mathematics requires incremental review and steady practice: not only the diligent effort required to master basic facts and operations, but also thoughtful and varied practice that approaches problems from a variety of angles, and gives children a variety of opportunities to apply the same concept or operation in different types of situations. While it is important to work toward the development of “higher-order problem-solving skills,” it is equally important—indeed, it is prerequisite to achieving “higher order” skills—to have a sound grasp of basic facts, and an automatic fluency with fundamental operations.



## I. Patterns and Classification

- Establish concepts of likeness and difference by sorting and classifying objects according to various attributes: size, shape, color, amount, function, etc.
- Define a set by the common property of its elements.
- In a collection of objects that includes a given set and an item that does not belong, indicate which item does not belong.
- Moving from concrete objects to pictorial representations, recognize patterns and predict the extension of a pattern.
- Extend a sequence of ordered concrete objects.

## II. Numbers and Number Sense

- Using concrete objects and pictorial representations, compare sets:
  - same as (equal to)
  - more than
  - less than
  - most
  - least
- Count
  - forward from 1 to 31, first beginning with 1, and later from any given number
  - backward from 10
  - from 1 to 10 by twos
  - by fives and tens to 50
- Write numbers 1 to 31 (with special attention to the difference between certain written symbols, such as 6 and 9; 2 and 5; 1 and 7; 12 and 21, etc.).
- Count and write the number of objects in a set.
- Given a number, identify one more, one less.
- Identify ordinal position, first (1st) through sixth (6th).
- Identify pairs.
- Interpret simple pictorial graphs.
- Identify  $\frac{1}{2}$  as one of two equal parts of a region or object; find  $\frac{1}{2}$  of a set of concrete objects.

## III. Money

- Identify pennies, nickels, dimes, and quarters.
- Identify the one-dollar bill.
- Identify the dollar sign (\$) and cents sign (¢).
- Write money amounts using the cents sign (¢).

#### IV. Computation

- Add and subtract to ten, using concrete objects.
- Recognize the meaning of the plus sign (+).
- Subtraction: the concept of “taking away”; recognize the meaning of the minus sign (-).

#### V. Measurement

- Identify familiar instruments of measurement, such as ruler, scale, thermometer.
- Compare objects according to:
  - Linear measure
    - long and short; longer than, shorter than
    - measure length using non-standard units
    - begin to measure length in inches
    - height: taller than, shorter than
  - Weight
    - heavy, light
    - heavier than, lighter than
  - Capacity (volume)
    - full and empty
    - less full than, as full as, fuller than
  - Temperature: hotter and colder
- Time
  - Sequence events: before and after; first, next, last.
  - Compare duration of events: which takes more or less time.
  - Read a clock face and tell time to the hour.
  - Know the days of the week and the months of the year.
  - Orientation in time: today, yesterday, tomorrow; morning, afternoon; this morning vs. yesterday morning, etc.

#### VI. Geometry

- Identify left and right hand.
- Identify top, bottom, middle.
- Know and use terms of orientation and relative position, such as:
  - closed, open
  - on, under, over
  - in front, in back (behind)
  - between, in the middle of
  - next to, beside
  - inside, outside
  - around
  - far from, near
  - above, below
  - to the right of, to the left of
  - here, there
- Identify and sort basic plane figures: square, rectangle, triangle, circle.
- Identify basic shapes in a variety of common objects and artifacts (windows, pictures, books, buildings, cars, etc.).
- Recognize shapes as the same or different.
- Make congruent shapes and designs.
- Compare size of basic plane figures (larger, smaller).

## Science: Kindergarten

**Teachers:** Effective instruction in science requires hands-on experience and observation. In the words of the 1993 report from the American Association for the Advancement of Science, *Benchmarks for Science Literacy*, "From their very first day in school, students should be actively engaged in learning to view the world scientifically. That means encouraging them to ask questions about nature and to seek answers, collect things, count and measure things, make qualitative observations, organize collections and observations, discuss findings, etc."

While experience counts for much, book learning is also important, for it helps bring coherence and order to a child's scientific knowledge. Only when topics are presented systematically and clearly can children make steady and secure progress in their scientific learning. The child's development of scientific knowledge and understanding is in some ways a very disorderly and complex process, different for each child. But a systematic approach to the exploration of science, one that combines experience with book learning, can help provide essential building blocks for deeper understanding at a later time.



### I. Plants and Plant Growth

**Teachers:** Through reading aloud, observation, and activities such as growing plants from seeds in varying conditions, explore the following with children:

- What plants need to grow: sufficient warmth, light, and water
- Basic parts of plants: seed, root, stem, branch, leaf
- Plants make their own food.
- Flowers and seeds: seeds as food for plants and animals (for example, rice, nuts, wheat, corn)
- Two kinds of plants: deciduous and evergreen
- Farming
  - How some food comes from farms as crops
  - How farmers must take special care to protect their crops from weeds and pests
  - How crops are harvested, kept fresh, packaged, and transported for people to buy and consume

### II. Animals and Their Needs

**Teachers:** Through reading aloud, observation, and activities, explore with children the common characteristics and needs of animals, including:

- Animals, like plants, need food, water, and space to live and grow.
- Plants make their own food, but animals get food from eating plants or other living things.
- Offspring are very much (but not exactly) like their parents.
- Most animal babies need to be fed and cared for by their parents; human babies are especially in need of care when young.
- Pets have special needs and must be cared for by their owners.

### III. The Human Body

- The five senses and associated body parts:
  - Sight: eyes
  - Hearing: ears
  - Smell: nose
  - Taste: tongue
  - Touch: skin
- Taking care of your body: exercise, cleanliness, healthy foods, rest

#### IV. Introduction to Magnetism

**Teachers:** Through reading aloud, observation, and experiments with magnets, introduce children to the idea that there are forces we cannot see that act upon objects. Children should:

- Identify familiar everyday uses of magnets (for example, in toys, in cabinet locks, in “refrigerator magnets,” etc.).
- Classify materials according to whether they are or are not attracted by a magnet.

#### V. Seasons and Weather

**Teachers:** The emphasis in kindergarten should be on observation and description; technical explanations of meteorological phenomena should be taken up in later grades; see grades 2 and 4 for more detailed study of Meteorology.

- The four seasons
- Characteristic local weather patterns during the different seasons
- The sun: source of light and warmth
- Daily weather changes
  - Temperature: thermometers are used to measure temperature
  - Clouds
  - Rainfall: how the condition of the ground varies with rainfall; rainbows
  - Thunderstorms: lightning and thunder, hail, safety during thunderstorms
  - Snow and snowflakes, blizzard

#### VI. Taking Care of the Earth

- Conservation: Some natural resources are limited, so people must be careful not to use too much of them (example: logging and reforestation).
- Practical measures for conserving energy and resources (for example, turning off unnecessary lights, tightly turning off faucets, etc.)
- Some materials can be recycled (for example, aluminum, glass, paper).
- Pollution (for example, littering, smog, water pollution) can be harmful, but if people are careful they can help reduce pollution.

#### VII. Science Biographies

George Washington Carver (botanist/discovered ways to keep soil rich)

Jane Goodall (studied chimpanzees)

Wilbur and Orville Wright (made first airplane)

