



# The Core Knowledge™ Series



Resource Books for Children  
from Year 1 to Year 6

## PRAISE FOR THE CORE KNOWLEDGE UK SERIES

*'The Core Knowledge Sequence puts knowledge back into primary education. Rich in content, challenging and with clear progression and continuity, it offers an excellent framework to ensure that pupils leave primary school with solid foundations for future learning.'*

– Peter Lawson, Head of Primary, Grindon Hall Christian School

*'Our recent Core Knowledge lessons on the Arctic have provided our children with a wealth of understanding. The lessons give children the facts, then we are free to create an enjoyable and engaging learning experience. Core Knowledge fuels our pupils' desire to learn more about the world around them.'*

– Emma Greaves, Reception Teacher, West London Free School Primary

*'It is vital that children receive a solid body of knowledge when they are at primary school because it allows them to expand their comprehension and access a wider field of learning. The Core Knowledge approach does just that. I cannot recommend it enough.'*

– Matthew Laban, Headteacher, Kingfisher Hall Primary Academy, London

*'Creativity, the arts and design are crucial to the environment and life of every citizen. They should occupy a central place in the curriculum at both primary and secondary levels. The new series published by Civitas, giving examples of how the arts and creativity can play a part in the education of every child, is a real contribution to the teaching of these subjects in all our schools.'*

– Sir Nicholas Serota, Director of Tate

*'A strong foundation of knowledge gained in the earliest years of education is such an important asset for children, sparking their imagination and providing the cornerstone for their future learning. I welcome the aim of the Core Knowledge books to do just that and I am sure that they will be valued by many parents wishing to help their children to do well at school.'*

– Munira Mirza, Deputy Mayor for Education and Culture of London

# What Your Year 2 Child Needs to Know

PREPARING YOUR CHILD  
FOR A LIFETIME OF LEARNING



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# A Note to Teachers

Throughout the book, we have addressed the suggested activities and explanations to ‘parents’, since you as teachers know your students and will have ideas about how to use the content of this book in relation to the lessons and activities you plan. To discuss using Core Knowledge UK materials in your school, please contact Civitas at 55 Tufton Street, London SW1P 3QL, 020 7799 6677.

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# Foreword to the UK Edition of the Core Knowledge Series

This is the second in a series of books for parents who want to help their children do well at school. It describes what every child should aim to have learnt by the end of the school year. It is not a description of everything that could be known but rather a guide to the knowledge that children will need to advance to the next stage of their education. Nor is it primarily a textbook, although it could be used as such – along with other teaching resources – if schools wish.

The Core Knowledge series gives parents the tools to judge how effectively their children are being taught. And it provides teachers with clear aims that can be shared with parents, thereby enlisting them in the common cause of getting the best from every child.

Why publish a British version of a book originally designed for American children? For the last 50 years in both Britain and America there has been no consensus about how and what children should be taught. Sometimes knowledge was dismissed as mere ‘rote learning’, which was contrasted unfavourably with ‘critical thinking skills’. Others argued that education should be ‘child centred’ not ‘subject centred’. Professor Hirsch, who inspired the Core Knowledge series, was among the first to see that the retreat from knowledge was misguided. Above all, he showed that to compare ‘knowledge’ with ‘thinking skills’ was to make a false contrast. They are not mutually exclusive alternatives. Thinking skills can be ‘knowledge-rich’ or ‘knowledge-lite’. The purpose of a good education is to teach children how to think clearly – to see through dubious reasoning, to avoid being conned, to learn how to question their own assumptions, to discover how to be objective or to argue a case with clarity. Knowledge does not get in the way of reasoning: it’s what we reason with.

The Core Knowledge approach has six main strengths.

- It helps parents to bring out the best in their children. It provides a guide to what young people should be learning and helps parents decide on the school best suited to their child.
- It helps teachers. By providing clear expectations that are shared with parents, teachers are better able to benefit every child. Schools are always at their best when parents and teachers work together.
- It helps children to learn on their own initiative. The books are written in language suitable for each year group, so that children can read alone or with their parents.

- It provides more equal opportunities for everyone. Some children do not receive effective support at home, perhaps because some of us did not ourselves get the best education. A good school can do much to make up for lost ground and the Core Knowledge curriculum is designed for this very task. The books describe what every child can learn if given the chance. What's more, many parents find that they learn as much as their children!
- It encourages social cohesion. Britain today has more cultures, ethnic groups and religions than 50 years ago. If we all share in a common stock of knowledge, social solidarity based on mutual respect for our legitimate differences is more likely.
- It strengthens democracy. A free and democratic society depends on the mass of people being well-informed. We often say that modern societies are 'knowledge based'. It's true. People who do not share in the knowledge that is regularly used by television news programmes or in our newspapers are at risk of being misled.

We are keen to work with teachers who share our ideals and who hope to play a leading part in developing this new curriculum in Britain. In co-operation with teachers, we will be evolving model lesson plans and resource guides, and if any teachers would like their school to be one of the pioneers, please contact Civitas at [coreknowledge@civitas.org.uk](mailto:coreknowledge@civitas.org.uk)

*David G. Green*  
Director of Civitas

# Introduction to the UK Edition of the Core Knowledge Curriculum for Year 2

The concerns which led Professor Hirsch and others to set up the Core Knowledge Foundation in the USA in 1986 are shared by many in Britain. Civitas has acquired direct experience of the problem through its network of supplementary schools. Beginning with a group of Bengali children in the East End of London in 2005, Civitas now runs 20 supplementary schools for over 600 children in different parts of the country. The children attend once a week, either on Saturdays or after school, for help with English and maths. The children are, for the most part, attending full-time schools in areas with higher-than-average indicators of social deprivation, where academic outcomes are not the best in the country. Some children join supplementary schools at the age of seven, eight or even older, unable to read properly and unable to handle simple addition and subtraction. Our approach in the Civitas schools has been to employ dedicated teachers with high expectations and a commitment to providing solid learning foundations. Children are assessed annually and it has become quite usual to see them make two or three years of progress in their reading and maths ages over the course of one calendar year.

The concepts that Professor Hirsch mentions in his General Introduction such as ‘critical thinking’ and ‘learning to learn’ have been just as prevalent in the UK’s schools, where the curriculum has become less knowledge-based and more focused on attaining ‘skills’, as if the two things can be separated. The acquisition of skills requires knowledge, and a knowledge-poor curriculum is one that condemns pupils – especially children from less advantaged backgrounds – to remain outside the mainstream of attainment and fulfilment. The Core Knowledge Foundation believes that all children should be able to unlock the library of the world’s literature; to comprehend the world around them; to know where they stand (literally) on the globe; and to realise the heritage that the history of their country has bestowed on them.

Making a reality of this ideal has been the outstanding achievement of the Core Knowledge Foundation in the hundreds of schools across the USA where its curriculum is being taught, and it is why we so admire the work of Professor Hirsch and his colleagues at the Core Knowledge Foundation.

As Professor Hirsch explains in his General Introduction, the project operates within the overarching framework of the Core Knowledge Sequence, produced by dozens of

educators over a gestational period of several years. To bring this sequence into the classroom or the home, the Sequence is fleshed out by a book for each year group. We at Civitas were honoured and delighted to be entrusted by the Core Knowledge Foundation with the task of adapting the books for teachers, parents and pupils in the UK. This has entailed some changes to reflect differences between our cultures, for example using British musical nomenclature in the Music chapter and changing imperial weights and measures to metric in Science, but for the most part the US text has been left intact – because knowledge is universal! We have revised recommended resource lists to include books and other materials readily available in the UK.

Since the publication of the Year 1 volume, we have put the Core Knowledge Sequence UK online at <http://www.coreknowledge.org.uk/sequence.php>. This will enable parents and teachers to understand how the grammar of each subject is unrolled over six years of primary school education. The UK Sequence follows the US Sequence very closely, with a few obvious changes. Maths has been slightly revised to reflect the demands of the National Curriculum; the works of art illustrated in the Visual Arts chapters can almost all be found in British museums and galleries; and British history and geography replace American. (American history and geography will be covered under World History and Geography.)

We share the view of the Core Knowledge Foundation that knowledge is best conveyed through subjects, and so we have followed their division of each book into chapters covering Language and Literature, History and Geography, Visual Arts, Music, Mathematics and Science. We will be producing volumes for each year group up to Year 6, and these will tie in with the UK version of the Core Knowledge Sequence.

In the USA children start full-time education in most states at Kindergarten when they are five rising six, whereas in the UK children of that age would be starting in Year 1. The first book in the Core Knowledge UK series, *What Your Year 1 Child Needs to Know*, was therefore based on the US volume *What Your Kindergartner Needs to Know*. This book, *What Your Year 2 Child Needs to Know*, is based on the US title *What Your First Grader Needs to Know*. There will be further year-books to cover the primary school age-range up to and including Year 6.

*Robert Whelan*  
General Editor, Civitas Core Knowledge Project

# General Introduction to the Core Knowledge Series

## I. WHAT IS YOUR CHILD LEARNING IN SCHOOL?

A parent of identical twins sent me a letter in which she expressed concern that her children, who are in the same grade in the same school, are being taught completely different things. How can this be? Because they are in different classrooms; because the teachers in these classrooms have only the vaguest guidelines to follow; in short, because the school, like many in the United States, lacks a definite, specific curriculum.

Many parents would be surprised if they were to examine the curriculum of their child's elementary school. Ask to see your school's curriculum. Does it spell out, in clear and concrete terms, a core of specific content and skills all children at a particular grade level are expected to learn by the end of the school year?

Many curricula speak in general terms of vaguely defined skills, processes and attitudes, often in an abstract, pseudo-technical language that calls, for example, for children to 'analyse patterns and data', or 'investigate the structure and dynamics of living systems', or 'work cooperatively in a group'. Such vagueness evades the central question: what is your child learning in school? It places unreasonable demands upon teachers, and often results in years of schooling marred by repetitions and gaps. Yet another unit on dinosaurs or 'pioneer days'. *Charlotte's Web* for the third time. 'You've never heard of the Bill of Rights?' 'You've never been taught how to add two fractions with unlike denominators?'

When identical twins in two classrooms of the same school have few academic experiences in common, that is cause for concern. When teachers in that school do not know what children in other classrooms are learning on the same grade level, much less in earlier and later grades, they cannot reliably predict that children will come prepared with a shared core of knowledge and skills. For an elementary school to be successful, teachers need a common vision of what they want their students to know and be able to do. They need to have *clear, specific learning goals*, as well as the sense of mutual accountability that comes from shared commitment to helping all children achieve those goals. Lacking both specific goals and mutual accountability, too many schools exist in a state of curricular incoherence, one result of which is that they fall far short of developing the full potential of our children. To address this problem, I started the non-profit Core Knowledge Foundation in 1986. This book and its companion volumes in the Core

Knowledge Series are designed to give parents, teachers – and through them, children – a guide to clearly defined learning goals in the form of a carefully sequenced body of knowledge, based upon the specific content guidelines developed by the Core Knowledge Foundation (see below, ‘The Consensus Behind the Core Knowledge Sequence’).

Core Knowledge is an attempt to define, in a coherent and sequential way, a body of widely used knowledge taken for granted by competent writers and speakers in the United States. Because this knowledge is taken for granted rather than being explained when it is used, it forms a necessary foundation for the higher-order reading, writing and thinking skills that children need for academic and vocational success. The universal attainment of such knowledge should be a central aim of curricula in our elementary schools, just as it is currently the aim in all world-class educational systems.

For reasons explained in the next section, making sure that all young children in the United States possess a core of shared knowledge is a necessary step in developing a first-rate educational system.

## II. WHY CORE KNOWLEDGE IS NEEDED

Learning builds on learning: children (and adults) gain new knowledge only by building on what they already know. It is essential to begin building solid foundations of knowledge in the early grades when children are most receptive because, for the vast majority of children, academic deficiencies from the first six grades can *permanently* impair the success of later learning. Poor performance of American students in middle and high school can be traced to shortcomings inherited from elementary schools that have not imparted to children the knowledge and skills they need for further learning.

All of the highest-achieving and most egalitarian elementary school systems in the world (such as those in Sweden, France and Japan) teach their children a specific core of knowledge in each of the first six grades, thus enabling all children to enter each new grade with a secure foundation for further learning. It is time American schools did so as well, for the following reasons:

### **(1) Commonly shared knowledge makes schooling more effective.**

We know that the one-on-one tutorial is the most effective form of schooling, in part because a parent or teacher can provide tailor-made instruction for the individual child. But in a non-tutorial situation – in, for example, a typical classroom with twenty-five or more students – the instructor cannot effectively impart new knowledge to all the students unless each one shares the background knowledge that the lesson is being built upon.

Consider this scenario: in third grade, Ms. Franklin is about to begin a unit on early explorers – Columbus, Magellan and others. In her class she has some students who were in Mr. Washington’s second-grade class last year and some students who were in Ms. Johnson’s second-grade class. She also has a few students who have moved in from other towns. As Ms. Franklin begins the unit on explorers, she asks the children to look at a globe and use their fingers to trace a route across the Atlantic Ocean from Europe to North America. The students who had Mr. Washington look blankly at her: they didn’t learn that last year. The students who had Ms. Johnson, however, eagerly point to the proper places on the globe, while two of the students who came from other towns pipe up and say, ‘Columbus and Magellan again? We did that last year.’

When all the students in a class *do* share the relevant background knowledge, a classroom can begin to approach the effectiveness of a tutorial. Even when some children in a class do not have elements of the knowledge they were supposed to acquire in previous grades, the existence of a specifically defined core makes it possible for the teacher or parent to identify and fill the gaps, thus giving all students a chance to fulfill their potential in later grades.

### **(2) Commonly shared knowledge makes schooling more fair and democratic.**

When all the children who enter a grade can be assumed to share some of the same building blocks of knowledge, and when the teacher knows exactly what those building blocks are, then all the students are empowered to learn. In our current system, children from disadvantaged backgrounds too often suffer from unmerited low expectations that translate into watered-down curricula. But if we specify the core of knowledge that all children should share, then we can guarantee equal access to that knowledge and compensate for the academic advantages some students are offered at home. In a Core Knowledge school, *all* children enjoy the benefits of important, challenging knowledge that will provide the foundation for successful later learning.

### **(3) Commonly shared knowledge helps create cooperation and solidarity in our schools and nation.**

Diversity is a hallmark and strength of our nation. American classrooms are usually made up of students from a variety of cultural backgrounds, and those different cultures should be honoured by all students. At the same time, education should create a school-based culture that is common and welcoming to all because it includes knowledge of many cultures and gives all students, no matter what their background, a common foundation for understanding our cultural diversity.

In the next section, I will describe the steps taken by the Core Knowledge Foundation to develop a model of the commonly shared knowledge our children need (which forms the basis for this series of books).

### III. THE CONSENSUS BEHIND THE CORE KNOWLEDGE SEQUENCE

The content in this and other volumes in the Core Knowledge Series is based on a document called the *Core Knowledge Sequence*, a grade-by-grade sequence of specific content guidelines in history, geography, mathematics, science, language arts and fine arts. The *Sequence* is not meant to outline the whole of the school curriculum; rather, it offers specific guidelines to knowledge that can reasonably be expected to make up about *half* of any school's curriculum, thus leaving ample room for local requirements and emphases. Teaching a common core of knowledge, such as that articulated in the Core Knowledge Sequence, is compatible with a variety of instructional methods and additional subject matters.

The *Core Knowledge Sequence* is the result of a long process of research and consensus building undertaken by the Core Knowledge Foundation. Here is how we achieved the consensus behind the *Core Knowledge Sequence*.

First we analysed the many reports issued by state departments of education and by professional organisations – such as the National Council of Teachers of Mathematics and the American Association for the Advancement of Science – that recommend general outcomes for elementary and secondary education. We also tabulated the knowledge and skills through grade six specified in the successful educational systems of several other countries, including France, Japan, Sweden and West Germany.

In addition, we formed an advisory board on multiculturalism that proposed a specific knowledge 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 knowledge children should have by the end of grade six. About 150 teachers (including college professors, scientists and administrators) were involved in this initial step.

These items were amalgamated into a master plan, and further groups of teachers and specialists were asked to agree on a grade-by-grade sequence of the items. That sequence was then sent to some one hundred educators and specialists who participated in a national

conference that was called to hammer out a working agreement on an appropriate core of knowledge for the first six grades.

This important meeting took place in March 1990. The conferees were elementary school teachers, curriculum specialists, scientists, science writers, officers of national organisations, representatives of ethnic groups, district superintendents and school principals from across the country. A total of twenty-four working groups decided on revisions in the *Core Knowledge Sequence*. The resulting provisional *Sequence* was further fine-tuned during a year of implementation at a pioneering school, Three Oaks Elementary in Lee County, Florida.

In only a few years, many more schools – urban and rural, rich and poor, public and private – joined in the effort to teach Core Knowledge. Based largely on suggestions from these schools, the *Core Knowledge Sequence* was revised in 1995: separate guidelines were added for kindergarten, and a few topics in other grades were added, omitted, or moved from one grade to another, in order to create an even more coherent sequence for learning. Revised editions of the books in the Core Knowledge Series reflect the revisions in the *Sequence*. Based on the principle of learning from experience, the Core Knowledge Foundation continues to work with schools and advisors to ‘fine-tune’ the *Sequence*, and is also conducting research that will lead to the publication of guidelines for grades seven and eight, as well as for preschool. (*The Core Knowledge Sequence UK* can be downloaded from the Civitas Core Knowledge website [www.coreknowledge.org.uk/sequence.php](http://www.coreknowledge.org.uk/sequence.php))

## IV. THE NATURE OF THIS SERIES

The books in this series are designed to give a convenient and engaging introduction to the knowledge specified in the *Core Knowledge Sequence*. These are resource books, addressed primarily to parents, but which we hope will be useful tools for both parents and teachers. These books are not intended to replace the local curriculum or school textbooks, but rather to serve as aids to help children gain some of the important knowledge they will need to make progress in school and be effective in society.

Although we have made these books as accessible and useful as we can, parents and teachers should understand that they are not the only means by which the *Core Knowledge Sequence* can be imparted. The books represent a single version of the possibilities inherent in the *Sequence*, and a first step in the Core Knowledge reform effort. We hope that publishers will be stimulated to offer educational software, games, alternative books and other imaginative vehicles based on the *Core Knowledge Sequence*.

These books are not textbooks or workbooks, though when appropriate they do suggest a variety of activities you can do with your child. In these books, we address your child directly, and occasionally ask questions for him or her to think about. The earliest books in the series are intended to be read aloud to children. Even as children become able to read the books on their own, we encourage parents to help their children read more actively by reading along with them and talking about what they are reading. You and your child can read the sections of this book in any order, depending on your child's interests or depending on the topics your child is studying in school, which this book may complement or reinforce. You can skip from section to section and re-read as much as your child likes.

We encourage you to think of this book as a guidebook that opens the way to many paths you and your child can explore. These paths may lead to the library, to many other good books and, if possible, to plays, museums, concerts and other opportunities for knowledge and enrichment. In short, this guidebook recommends places to visit and describes what is important in those places, but only you and your child can make the actual visit, travel the streets and climb the steps.

## V. WHAT YOU CAN DO TO HELP IMPROVE EDUCATION

The first step for parents and teachers who are committed to reform is to be sceptical about oversimplified slogans like 'critical thinking' and 'learning to learn'. Such slogans are everywhere and, unfortunately for our schools, their partial insights have been elevated to the level of universal truths. For example: 'What students learn is not important; rather, we must teach students to learn *how* to learn.' 'The child, not the academic subject, is the true focus of education.' 'Do not impose knowledge on children before they are developmentally ready to receive it.' 'Do not bog children down in mere facts, but rather, teach critical-thinking skills.' Who has not heard these sentiments, so admirable and humane, and – up to a point – so true? But these positive sentiments in favour of 'thinking skills' and 'higher understanding' have been turned into negative sentiments against the teaching of important knowledge. Those who have entered the teaching profession over the past forty years have been taught to scorn important knowledge as 'mere facts', and to see the imparting of this knowledge as somehow injurious to children. Thus it has come about that many educators, armed with partially true slogans, have seemingly taken leave of common sense.

Many parents and teachers have come to the conclusion that elementary education must strike a better balance between the development of the ‘whole child’ and the more limited but fundamental duty of the school to ensure that all children master a core of knowledge and skills essential to their competence as learners in later grades. But these parents and teachers cannot act on their convictions without access to an agreed upon, concrete sequence of knowledge. Our main motivation in developing the *Core Knowledge Sequence* and this book series has been to give parents and teachers something concrete to work with.

It has been encouraging to see how many teachers, since the first volume in this series was published, have responded to the Core Knowledge reform effort.

Parents and teachers are urged to join in a grassroots effort to strengthen our elementary schools. The place to start is in your own school and district. Insist that your school clearly state the core of *specific* knowledge and skills that each child in a grade must learn. Whether your school’s core corresponds exactly to the Core Knowledge model is less important than the existence of some core – which, we hope, will be as solid, coherent, and challenging as the *Core Knowledge Sequence* has proven to be. Inform members of your community about the need for such a specific curriculum, and help make sure that the people who are elected or appointed to your local school board are independent minded people who will insist that our children have the benefit of a solid, specific, world class curriculum in each grade.

Share the knowledge!

*E. D. Hirsch, Jr.*  
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