

More Than Words

An Early Grades Reading Program Builds Skills and Knowledge



BY JENNIFER DUBIN

Joyce Barrett-Walker knew her students could do better. Every month, the principal, then in her second year at P.S. 96 in Queens, a preK-6 neighborhood school, would review samples of their writing to gauge their academic progress. The first-person accounts, full of thoughts and feelings about mundane events, concerned her; the writing was shallow and vacuous. Today, nearly 10 years later, she still remembers one sample that epitomized just how little they were learning: a fourth-grader whose teacher had asked the class to write about a phenomenal experience in their lives wrote about a trip to a local shopping mall.

Jennifer Dubin is the assistant editor of American Educator. Previously, she was a journalist with the Chronicle of Higher Education. The photos above and on the following pages show students and teachers from P.S. 96 and Goldie Maple Academy in Queens, New York, using the Core Knowledge Language Arts Program.

The school was not challenging students with enough nonfiction, nor was it asking them to write about the few informational texts they had read. As a result, a lack of science and social studies knowledge—which is really knowledge of the world—had left her students, many of whom were low-income, without anything really interesting to write.

Barrett-Walker did not blame her students, their parents, or her teachers. She knew they were not at fault. She blamed the curriculum. The school's Balanced Literacy and Writer's Workshop programs had some fine components, but they did not pay enough attention to the quality and content of the texts children were reading, relied too heavily on reading comprehension strategies (such as finding the main idea and identifying the author's audience), and put more emphasis on the process of writing than on what was being written. Especially in the early grades, very little time was devoted to teaching the broad knowledge and vocabulary that make text understandable and give students engaging topics to write about.

At Barrett-Walker's previous school, where she was an assistant principal, the administration had started to implement Core

Knowledge, a content-rich curriculum for grades K-8 that outlines what to teach in language arts, geography, mathematics, science, and fine arts, but lets teachers decide how to teach these topics. She had also read *The Knowledge Deficit: Closing the Shocking Education Gap for American Children*, by E. D. Hirsch, Jr., Core Knowledge's founder, in which he explains how and why broad knowledge—not reading strategies—builds reading comprehension.

Not long after reading that shopping-mall story, Barrett-Walker sent four teachers at P.S. 96 to a Core Knowledge conference, and they returned excited by what they had learned. “The curriculum had so much substance,” she recalls them saying.

What it did not have was a component for explicitly teaching children how to read. Although P.S. 96 adopted the Core Knowledge curriculum, that did not change how teachers taught reading and writing, particularly in the early grades. By third grade, most students had mastered decoding, but many students still struggled with reading comprehension. That all changed in 2008, when P.S. 96 decided to test out Core Knowledge's new early reading program.

Five years ago, as a way to ensure that students not only learn to decode but also understand what they decode, the Core Knowledge Foundation, the nonprofit that publishes the Core Knowledge curriculum, created a language arts program for kindergarten through second grade.* The program includes two 60-minute strands: a “Skills Strand,” in which students learn decoding, encoding (writing), spelling, and grammar; and a “Listening and Learning Strand,” in which they engage with a wide variety of fiction and nonfiction texts so as to build oral language, knowledge, and vocabulary—the real keys to comprehension.

Beginning in the fall of 2008, P.S. 96 and nine other New York City schools piloted the language arts program for three years. The city released the results last spring: on average, students taught to read using the Core Knowledge program scored higher on reading comprehension, science, and social studies tests than did students in 10 comparison schools that used other reading programs. Just as important, students made these gains in background knowledge without falling behind in learning to decode.

While the conventional wisdom has long held that students first learn to read and then, around the end of third grade, switch to reading to learn, Core Knowledge shows that students in kindergarten through second grade are fully capable of—and benefit from—acquiring both decoding skills and content knowledge at the same time.

The program's Skills Strand, although high quality, is not what makes this program unique. Other early-grades reading programs



also do a good job of helping children make the all-important speech-to-print connection through research-based phonics instruction. It's the content knowledge delivered through the Listening and Learning Strand that makes this program stand out—so that's what this article explores.

Visits to two high-poverty schools that piloted the program reveal the sophisticated content that students actually learn:

Core Knowledge shows that students in kindergarten through second grade can acquire decoding skills and content knowledge at the same time.

presidents and American symbols, astronomy, frontier explorers, and immigration, among other subjects not often found in grades K-2. Such topics enable teachers to build young children's knowledge of the world and prepare them for academic courses in later grades, even as they indeed learn to read.

Learning by Listening

Every day, children listen to complex texts that their teacher reads aloud to increase their oral language comprehension, vocabulary, and knowledge. In each of the program's grades—kindergarten, first, and second—students hear and discuss fiction and nonfiction texts organized in 12 subject-matter domains.† For example, the kindergarten domains are as follows: nursery rhymes and fables, the five senses, stories, plants, farms, Native Americans, kings and queens, seasons and weather, Columbus and the Pilgrims, colonial towns and townspeople, taking care of the Earth, and presidents and American symbols. Grouping texts into

*The Core Knowledge Foundation also developed third-grade language arts materials, which P.S. 96 and four other New York City public schools field tested in the 2011–2012 school year. The New York City Department of Education did not have funding for this field test, so Core Knowledge secured additional funding and will finish revisions to the third-grade materials in December.

†For a complete list of domains, see “Envisioning a Common Core Curriculum,” in the Winter 2010–2011 issue of *American Educator*, available at www.aft.org/pdfs/americaneducator/winter1011/CommonCore.pdf.



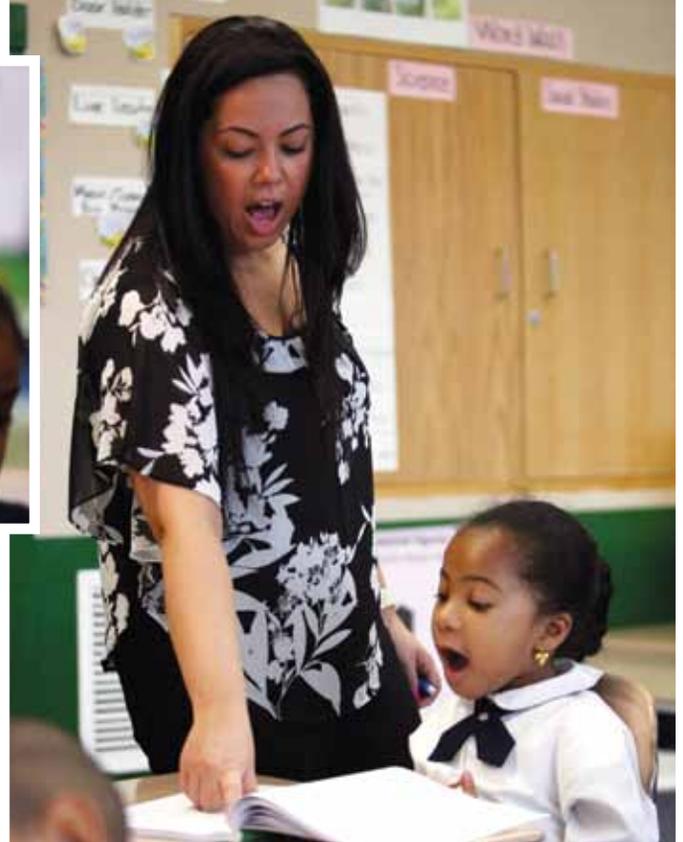
domains is an effective method for teaching knowledge and vocabulary.* One text on the weather, for instance, can only introduce so many new words and concepts. By being immersed in a domain for two to three weeks, students have time to explore the topic in greater depth, make connections to related topics, and use their new vocabulary enough for the words and concepts to

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stick. The Core Knowledge program is carefully developed so that concepts and words not only build on each other within each domain, but across domains and grades as well. The repetition gives students multiple opportunities to pick up information they might not have grasped the first time; it also takes advantage of an important finding from cognitive science: the more you know about a topic, the easier it is for you to learn more about it.†

A look at the previously mentioned list of kindergarten domains shows how they reinforce each other. Nursery rhymes and fables include tales such as “Humpty Dumpty” and “The Lion and the Mouse,” which introduce students to the word “king,” and a king (and queen) sent Columbus to the new world, where he encountered Native Americans, who knew a great deal about taking care of the Earth, etc. The more you think about it, the more connections you’ll see—and the better you will grasp how kindergartners who have studied all of these domains, in this order, will have a substantial body of knowledge about our early agrarian society.

In the early domains, the texts that teachers read aloud tend to



be quite short, consisting of only a few sentences. The program accounts for the fact that it takes time to build young children’s attention spans, so throughout the year the read-alouds grow in length and sophistication. For instance, as the domains progress in kindergarten, and students’ capacity to focus and listen improves, read-alouds include anywhere from two to four pages of more complex text.

When a teacher reads aloud a complex text, asking questions along the way and/or afterward, she teaches them specific vocabulary and builds their knowledge of a particular subject. Read-alouds are essential throughout the elementary grades because research has shown that (1) listening comprehension, on average, is greater than reading comprehension until children are 12 to 13 years old,‡ and (2) even elementary written texts are richer and more complex than spoken language.§ So while the ultimate goal is for students to read complex texts independently, a teacher obviously can’t start there. She can, however, ask children to listen carefully to a text that she herself reads aloud. Then she can deepen their understanding by discussing it with them at length, as well as asking them to draw pictures and write a few sentences about what they have learned.

To supplement the read-alouds, Core Knowledge provides trade books to share with students. Several are fiction—classics such as “Brer Rabbit” and “Little Red Riding Hood” as well as tales from around the world. The fiction in this program contributes to building students’ knowledge not only by enhancing the science and social studies domains (which include fictional works), but

*For a thorough review of the research on how reading comprehension depends on knowledge and vocabulary, and how to teach all three, see the Spring 2006 issue of *American Educator*, available at www.aft.org/newspubs/periodicals/ae/spring2006/index.cfm.

†To learn more, see E. D. Hirsch, Jr.’s article in the Spring 2003 issue of *American Educator*, available at www.aft.org/pdfs/americaneducator/spring2003/Hirsch.pdf.

‡To learn more about listening and reading comprehension, see Andrew Biemiller’s article in the Spring 2003 issue of *American Educator*, available at www.aft.org/newspubs/periodicals/ae/spring2003/hirschsboral.cfm.

§For more on why written text is more complex than oral language, see Marilyn Jager Adams’s article in the Winter 2010–2011 issue of *American Educator*, available at www.aft.org/pdfs/americaneducator/winter1011/Adams.pdf.

also by including stories and characters that are part of the broader society's shared knowledge. For example, many adults in the United States would understand that a Brer Rabbit-type person is clever and prone to trickery.

There are fewer fictional texts in this program than in many traditional language arts programs, which rely heavily on fiction. But the balance in Core Knowledge nicely aligns with the Common Core State Standards in English Language Arts, which call for roughly equal time to be devoted to literary and informational texts in the elementary grades.**

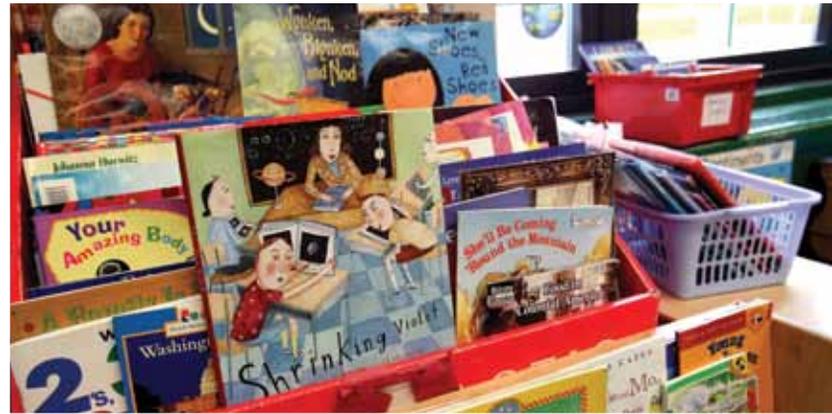
In fact, this program aligns so well with the standards, which more than 40 states have adopted, that the New York State Education Department has contracted with Core Knowledge to make the program available throughout the state and to develop pre-school-level materials. As part of this contract, Core Knowledge will post language arts materials online at www.engageny.org, a New York state website, so that teachers from all over the country can download them for free.††

**Officially, these are the Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects, which are available at www.corestandards.org/ELA-Literacy.

††The Core Knowledge Language Arts Program is not yet widely available, but the Core Knowledge Foundation is in discussions with publishers to make it available to schools.

Materials Let Teachers Teach

Along with P.S. 96, P.S. 333 (Goldie Maple Academy), a preK-8 neighborhood school in Far Rockaway, was also one of the pilot schools for the K-2 language arts program. Only 10 miles apart in Queens, the schools serve mostly low-income students. Of the 305 students enrolled in P.S. 96 in 2010-2011, nearly 70 percent received free or reduced-price meals and roughly half were African American or Hispanic. Also, 10 percent of P.S. 96 students were English language learners (ELLs). Barrett-Walker says that in recent years, families from the Dominican Republic, India, Mexico, Pakistan, Puerto Rico, and Yemen have moved to the neighborhood. Meanwhile, few ELL students attend Goldie Maple; less than 1 percent in 2010-2011. The majority of students that year were African American or Hispanic. Of the 488 students enrolled, roughly 85 percent received free or reduced-price meals.



A Promising Pilot

Before publishing its new Language Arts Program, the Core Knowledge Foundation worked with the New York City Department of Education's Research and Policy Support Group to conduct a three-year pilot study.* Twenty similar schools, all with high percentages of students from low-income families, were selected—10 to implement the new program in kindergarten through second grade, and 10 to serve as comparison schools (without changing their programs or methods). The pilot explored students' progress in learning to read and increasing their knowledge, so students took several different reading and comprehension tests, as well as science and social studies tests.

At the end of the third year, the second-graders in the Core Knowledge schools scored higher, on average, on all tests than those in the comparison schools (all results but one were statistically significant). Fall-to-spring testing using

the Woodcock-Johnson Brief Reading Test (which includes measures of basic reading skills and oral reading comprehension) found that gains made by second-graders in the Core Knowledge schools were more than double those of their peers in the comparison schools.

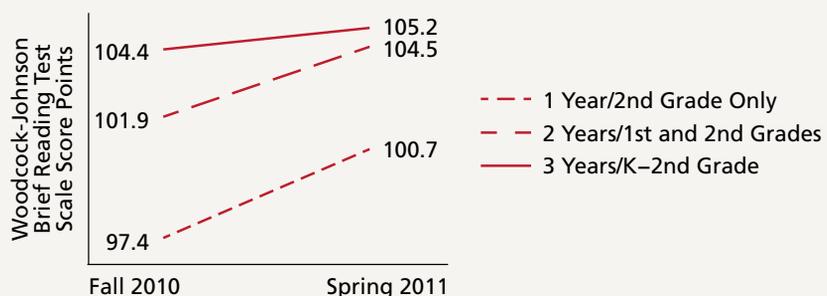
Digging a little deeper into the results in the Core Knowledge schools shows both immediate and long-term benefits. As the graph below shows, the largest gains were made by second-graders who had just enrolled in a school piloting the program and thus had experienced only one year of Core Knowledge. The highest

overall achievement, however, was attained by students who had been through the complete three-year program.

The results are impressive, but at this stage it's best to think of the program as "promising," not "proven." No one study is ever conclusive, so more studies will need to be done. But the program rests on the best of several decades of research on language development, reading, and comprehension, so we can expect more good results in the future.

—EDITORS

Average fall and spring reading scores in the final year of the three-year pilot, by years in the Core Knowledge Language Arts Program



*All data for the pilot come from "Evaluating the NYC Core Knowledge Early Literacy Pilot: Year 3 Report," by the New York City Department of Education Research and Policy Support Group (March 2012). The report can be found on pages 7-24 of the following document: www.bit.ly/MfAb5F. Data for the chart on the right are from page 15.

Barrett-Walker at P.S. 96, and Angela Logan, the principal of Goldie Maple, say they decided their schools would participate in the pilot because both were already Core Knowledge schools.* But some teachers were apprehensive.

At P.S. 96, Monica Tufano had concerns. “I said to myself, ‘How are we going to teach little 5-year-olds to focus and listen to me



read?” says the kindergarten teacher. She wondered if her students would squirm and struggle to pay attention during the more complex read-alouds that last 10 to 15 minutes. Once she started using the program, though, she realized they soaked up the rich content.

A visit to her class reveals just how much students engage with the material during the Listening and Learning Strand. As they sit on the reading carpet in a corner of the room, they gaze at a picture of a farmer holding a bunch of carrots in a field. They listen attentively as Tufano explains that they will learn about crops today.

The lesson is part of the farms domain in which students study agriculture. The domain builds on information students learned in the previous domain, plants, and it sets the stage for the seasons and weather domain they will study later. Vocabulary words such as “crops” and “produce” overlap between the farms and plants domains, while “seedlings” appears in both the plants and the seasons and weather domains, so that students will have multiple exposures to the concepts behind these words and will start using them with ease.

Tufano begins by asking students to name their favorite foods and then explains that “everything we like starts out somewhere else.” She tells them to listen to the story she’s about to read to learn where their favorite foods come from.

“I have mentioned before that I plant and harvest crops of

wheat and corn on my farm, which I feed to my animals,” Tufano reads. The “I” refers to Old MacDonald, a character in the story who appears throughout the domain. “I also raise these crops, as well as others—like cucumbers, beans, and carrots—for my family and other people to eat.”

Tufano then points to “the pretty picture” of fields of crops now in front of them. To see if students have been listening, she asks what crops Old MacDonald raises. They correctly call out carrots, cucumbers, and beans. She continues reading until she comes to the word “soil,” which she explains means dirt.

“The farmer who lives next to me grows potatoes on her farm,” Tufano reads as she shows them a picture of a potato field. “But even if you look closely at the picture, you won’t see any potatoes,”

she continues to read. “That’s because the potatoes are actually part of the roots of the potato plant! So where do you think the potatoes are?” she asks, continuing to read from the text.

“Underground!” the students call out.

Tufano says that all plants have roots, and that potato plants have edible roots but not all plants’ roots are edible. She asks the class to explain what “edible,” a bold-faced vocabulary word in the Core Knowledge teacher guidebook she holds in her hands, means. The students remain quiet; they don’t know the answer.

“That cake was edible,” Tufano says, using the word in another sentence. “‘Edible’ means I would do what with it?”

The students figure it out. “Eat it,” they say.

After the 10-minute read-aloud, she reviews what they have just heard.

“Why do farmers grow crops?” Tufano asks.

One student says so the cows can eat.

“Is it only the cows that eat?” Tufano asks.

Nancy adds that all the animals eat.

“Thank you, Nancy,” Tufano says. “What’s the second reason? Who else do they grow crops for?”

“People,” the students call out.

Tufano says they are now going to sequence what the farmer does to prepare his crops. “What does ‘sequence’ mean?”

*Core Knowledge schools implement the full Core Knowledge curriculum. To learn more, visit www.coreknowledge.org/about-core-knowledge-schools.

The students say “order.”

Tufano then says, “First, he has to dig the dirt, so he has to prepare the...”

“Soil,” a boy says.

Together, the class lists the next steps: plowing the soil and planting the seeds. When Nicholas says the farmer then waters the soil, Tufano is pleased. “I love that sentence because he used the word soil instead of dirt,” she tells the class. “He’s using the vocabulary that we’re learning.”

Although the Core Knowledge program tells them what to teach, several teachers at both schools say that it doesn’t make their teaching feel scripted. After all, no one tells them *how* to deliver the content. They emphasize that they must still prepare

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for classroom lessons. Not only do they need to become familiar with the vocabulary, guided questions, and explanations of key concepts students will learn, they have to figure out how to teach that rather sophisticated material to their students. The domains do have some overlap of words and concepts, but they are not redundant. Knowledge from previous domains is used and expanded.

As she sits in a rocking chair with her students assembled on the reading carpet before her, it’s clear that Jena Peluso, a second-grade teacher at Goldie Maple, has prepared for today’s lesson. With the teacher guidebook on immigration—the domain the class is now studying—resting on her lap, Peluso is not merely reciting words from a page during the Listening and Learning Strand. She reads with expression and makes eye contact with students to ensure they pay attention. She tells them about the Pilgrims and explains why they came to the United States.

A few minutes later, to make sure students have been listening, she asks, “Why did the Pilgrims have to come to North America?” The

question is one of the “guided questions” from her handbook that teachers are encouraged (but not required) to ask.

“To discover America,” a boy says.

Peluso gently corrects him, “America was already discovered,” and calls on someone else.

“The people did not let them pray in their own way,” another boy says.

“What people?” Peluso asks, trying to jog his memory of an earlier lesson.

Suddenly the class remembers. “England,” students call out excitedly.

She prods them to be more precise. “Who’s in charge of England?” she asks.

“A king,” they say.

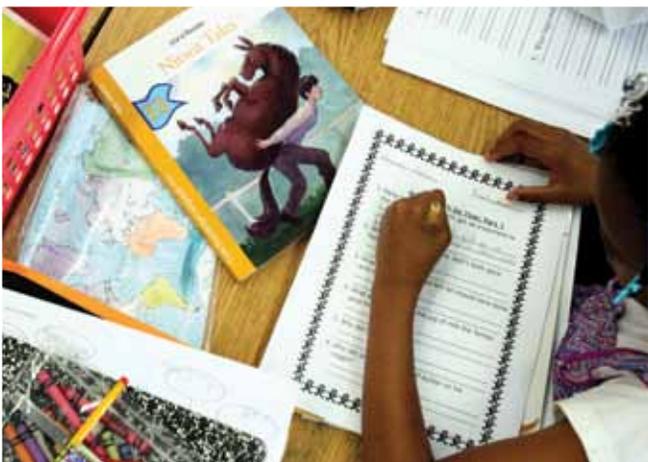
An easel covered with words such as “freedom,” “immigrant,” “immigrate,” and “settle” stands next to Peluso. A flipbook with large, colorful pictures that accompanies this domain is also propped against it. As students listen to Peluso, they look at the pictures.

“So, what is an immigrant?” she reads. “An immigrant is someone who comes from another country to settle in a new place.” A few sentences later, she explains why “push and pull factors” might prompt people to move. She asks students to repeat the phrase, and little voices echo her.

“Push factors are the problems in one’s home country that would ‘push’ you out of your country, or make you leave,” Peluso says. She turns to a page in the flipbook with four pictures: hands begging for food, a crumbling building, a military tank, a flooded street. Peluso explains how these images illustrate dangerous circumstances that would “push” people to leave their homes. Then she defines “pull factors” such as freedom and job opportunities that would encourage people to come to the United States.

After the 15-minute read-aloud and discussion, students draw pictures and write three sentences relating to immigration. Peluso walks around the room to answer questions. “Before you color, I want your sentences written,” she reminds them.

The students do not base their writing solely on what they’ve



heard in this morning's read-aloud. Whether they realize it or not, they also draw on what they've learned from read-alouds in previous grades. Their knowledge of kings and queens, Columbus and the Pilgrims, colonial towns and townspeople, and the birth of our nation has shaped their understanding not only of this particular assignment but of U.S. history in general.

While several students draw pictures of people in houses and American flags, Elizabeth's imagination has led her to illustrate a girl standing on a ship, holding bags in each hand. Beneath her picture she has written: "Immigrants are people that travel from a country to another. They came to America because they wanted a better life and freedom. The Pilgrims moved to America because the King said to worship his way."

For the next few minutes, she and her classmates contentedly color, just one of many ways they will solidify what they have learned.

Although the pilot has ended, P.S. 96 and Goldie Maple will continue to use Core Knowledge's K-2 language arts program. That her school will stick with it is good news to Marta Torres, a first-grade teacher at P.S. 96. She says the program has allowed her to focus on the craft of teaching, not the endless pursuit of instructional materials. Before the pilot, she remembers searching in the library for a book to teach students "author's purpose" and feeling so overwhelmed that she would literally cry, "Which book should I use?" Torres is relieved that she no longer spends her "prep" time looking for books. "This program has everything for you."

Angela Logan, Goldie Maple's principal, credits the program with increasing academic achievement, especially for special needs students, some of whom start kindergarten not knowing any letter sounds. "When you look at the assessments and you see the growth over time, you can see how much they really have internalized," she says.

Linda Bevilacqua, Core Knowledge's president, says the foundation insisted on students with special needs and ELLs being included in the pilot. "The materials as we originally developed them were very supportive of those students," she says. And thanks to teachers' suggestions throughout the pilot, the foundation now includes further supports. It built in more repetition in the Skills Strand and created an assessment and remediation guide—a series of supplemental materials for each grade level so teachers can provide more targeted instruction as needed.

At P.S. 96, Barrett-Walker still reviews students' writing monthly. She beams with pride in discussing the deep knowledge the children convey and how they organize their thoughts and ideas. "We still do the workshop model" for learning to write, she says. "It's easier now because the students have so many different topics they have learned with Core Knowledge."

Students have acquired enough background knowledge in the early grades that, once they are in fourth grade, they no longer need to write about commonplace occurrences such as a visit to a shopping mall. Now, their teachers ask them to pretend they are Roman soldiers and to describe their lives and responsibilities, or to imagine they are immigrants in America at the turn of the 20th century writing a letter to family members back home. Pencils in hand, the words come quickly. Full of meaning, the sentences reveal the rich content that all our students should know. □

Telling Good Science from Bad

(Continued from page 12)

make you take more time with each action, and articulating your thoughts will increase their precision. It's well worth the time now, given that a change usually represents a significant investment of your time, money, and energy, not to mention the time and energy of your kids. If you do take the time, you'll see that many changes do not stand up to being stripped and flipped. As we've discussed, some will be familiar, vague, or too extravagant. Others will lose all appeal once stripped—there was nothing persuasive about them without the emotional appeal or misleading analogy. And still others will not seem impressive enough to be worth the investment once flipped.

I believe that the practice of education would be improved if better use were made of scientific advances, and if educators were better able to discern good science from bad. Will we continue to cheer on education reforms that sound right to us, convinced that the "evidence" supporting them must be strong only because we like the conclusion? Or will we cast a cold eye on our own beliefs, confident that, to paraphrase Francis Bacon, by beginning with doubt, we will end with certainty? If we can do so, our children will be the richer for it. □

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