

Inquiry Illuminated

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Researcher's Workshop Across the Curriculum



Anne Goudvis • Stephanie Harvey • Brad Buhrow
with Karen Halverson

Photography by Ehren Joseph

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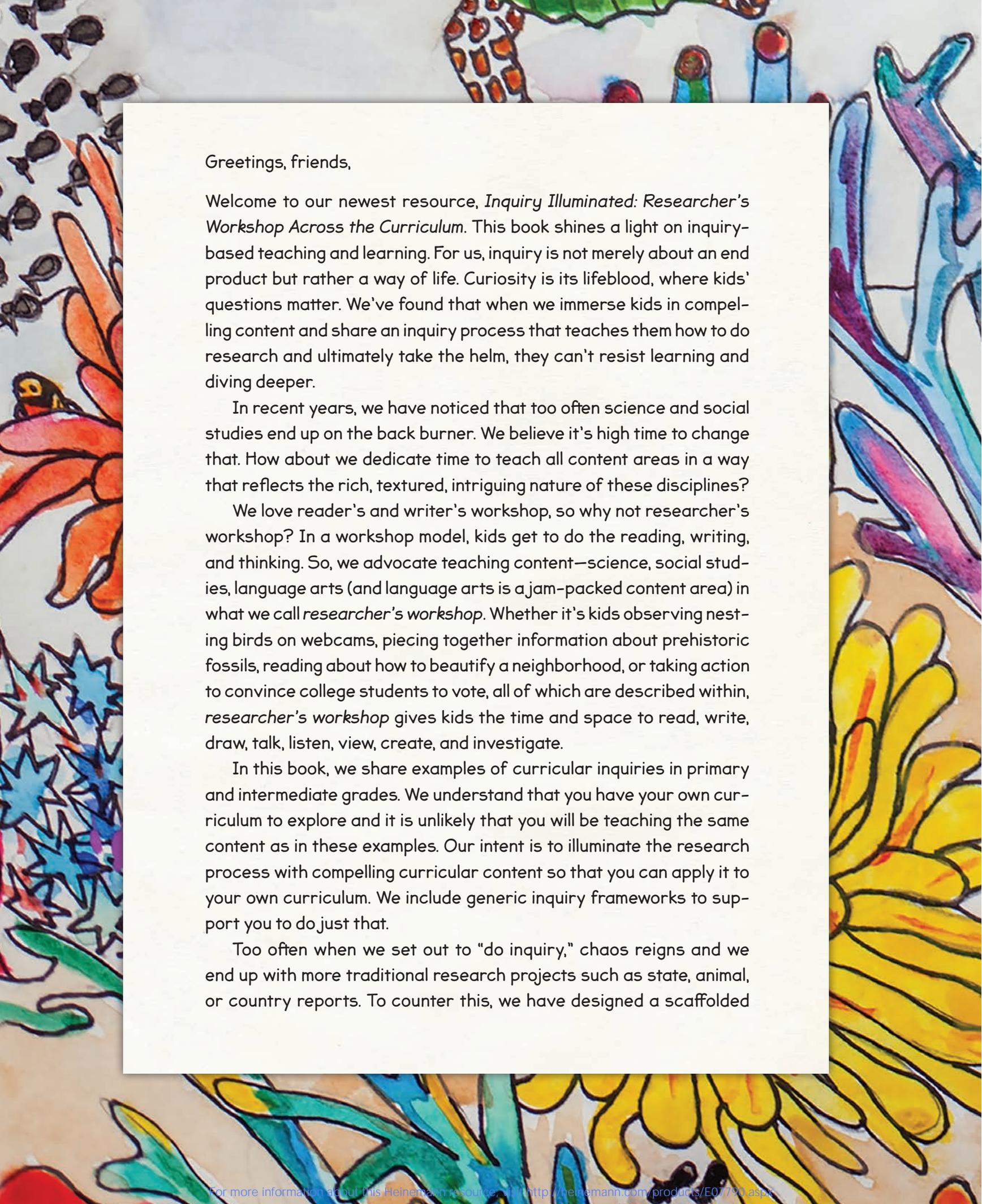
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“It may be that our cosmic curiosity . . . is a genetically encoded force that we illuminate when we look up and wonder.”

—Neil DeGrasse Tyson



***To all the fearless and thoughtful teachers
and kids who are willing to wonder
and learn with us.***



Greetings, friends,

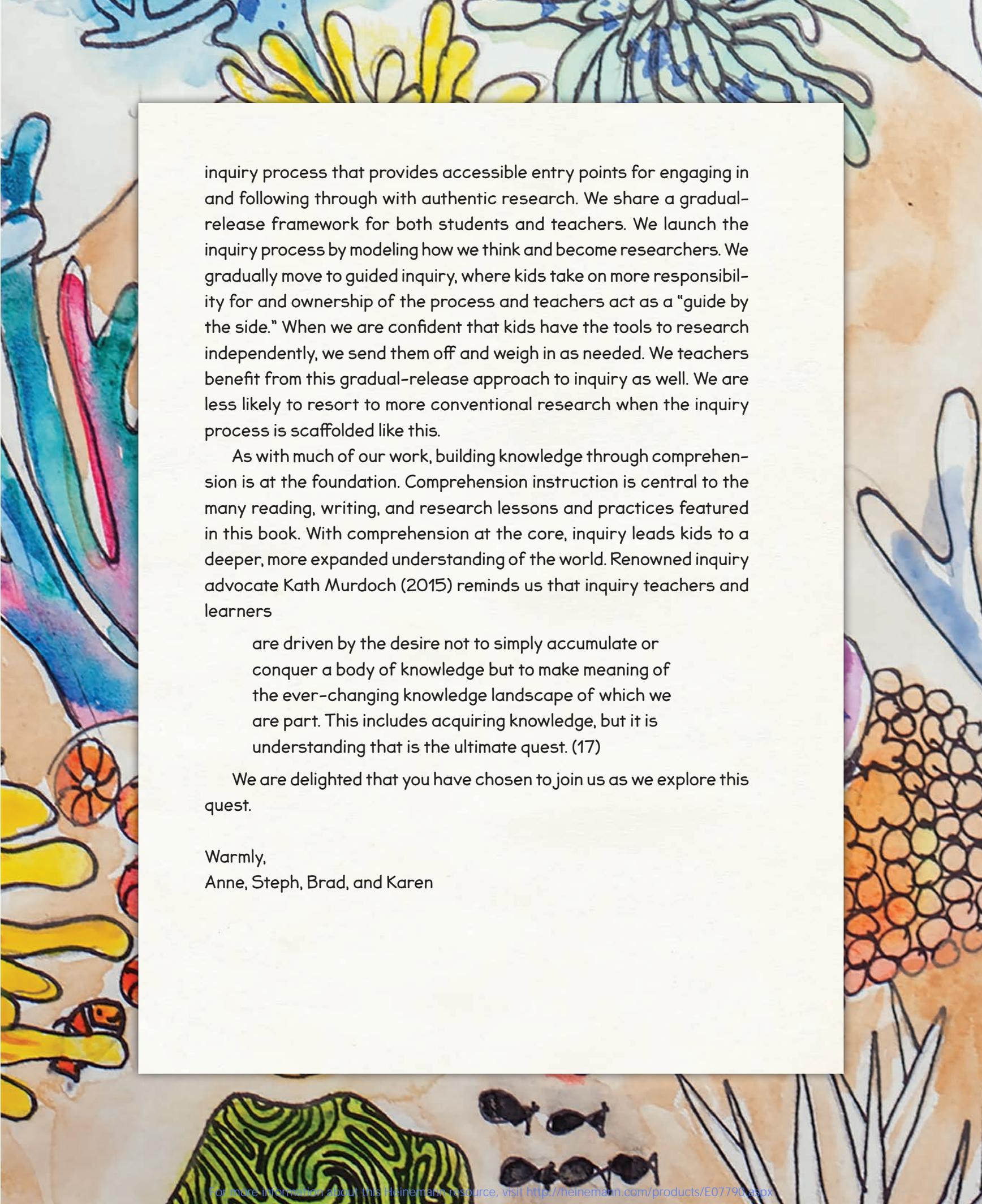
Welcome to our newest resource, *Inquiry Illuminated: Researcher's Workshop Across the Curriculum*. This book shines a light on inquiry-based teaching and learning. For us, inquiry is not merely about an end product but rather a way of life. Curiosity is its lifeblood, where kids' questions matter. We've found that when we immerse kids in compelling content and share an inquiry process that teaches them how to do research and ultimately take the helm, they can't resist learning and diving deeper.

In recent years, we have noticed that too often science and social studies end up on the back burner. We believe it's high time to change that. How about we dedicate time to teach all content areas in a way that reflects the rich, textured, intriguing nature of these disciplines?

We love reader's and writer's workshop, so why not researcher's workshop? In a workshop model, kids get to do the reading, writing, and thinking. So, we advocate teaching content—science, social studies, language arts (and language arts is a jam-packed content area) in what we call *researcher's workshop*. Whether it's kids observing nesting birds on webcams, piecing together information about prehistoric fossils, reading about how to beautify a neighborhood, or taking action to convince college students to vote, all of which are described within, *researcher's workshop* gives kids the time and space to read, write, draw, talk, listen, view, create, and investigate.

In this book, we share examples of curricular inquiries in primary and intermediate grades. We understand that you have your own curriculum to explore and it is unlikely that you will be teaching the same content as in these examples. Our intent is to illuminate the research process with compelling curricular content so that you can apply it to your own curriculum. We include generic inquiry frameworks to support you to do just that.

Too often when we set out to "do inquiry," chaos reigns and we end up with more traditional research projects such as state, animal, or country reports. To counter this, we have designed a scaffolded



inquiry process that provides accessible entry points for engaging in and following through with authentic research. We share a gradual-release framework for both students and teachers. We launch the inquiry process by modeling how we think and become researchers. We gradually move to guided inquiry, where kids take on more responsibility for and ownership of the process and teachers act as a “guide by the side.” When we are confident that kids have the tools to research independently, we send them off and weigh in as needed. We teachers benefit from this gradual-release approach to inquiry as well. We are less likely to resort to more conventional research when the inquiry process is scaffolded like this.

As with much of our work, building knowledge through comprehension is at the foundation. Comprehension instruction is central to the many reading, writing, and research lessons and practices featured in this book. With comprehension at the core, inquiry leads kids to a deeper, more expanded understanding of the world. Renowned inquiry advocate Kath Murdoch (2015) reminds us that inquiry teachers and learners

are driven by the desire not to simply accumulate or conquer a body of knowledge but to make meaning of the ever-changing knowledge landscape of which we are part. This includes acquiring knowledge, but it is understanding that is the ultimate quest. (17)

We are delighted that you have chosen to join us as we explore this quest.

Warmly,
Anne, Steph, Brad, and Karen

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To build a culture for inquiry in our classrooms, six cornerstones foster spirited, thoughtful learning: curiosity, workshop, content, comprehension, collaboration, and environment. These provide a strong foundation for inquiry at every grade level and across the curriculum.

Researcher’s Workshop **41**

Enter Brad Buhrow’s classroom to see how the cornerstones come to life in researcher’s workshop. We introduce eleven core practices and lessons to teach the research process. We launch the inquiry process with whole-class research and gradually release kids to take more responsibility for the process. Finally kids take off on their own, confident as they use their repertoire of comprehension strategies and research tools to investigate their questions and interests.

Reading and Writing in Support of Inquiry **109**

In this chapter, you’ll find more than twenty additional lessons and practices that are essential tools for readers, writers, and researchers. We often introduce these in reader’s and writer’s workshop, but students use them throughout the day and across the curriculum as they read, write, talk, listen, create, and investigate.

Inquiry Across the Grades **175**

Peek into classrooms where researcher’s workshop is central to learning. Examples of inquiries in science, language arts, and social studies in grades one through four will spark your own ideas for inquiries with your curriculum. Inquiries featured here include investigating various cultures, learning to think like scientists, and exploring different perspectives in history.

Inquiry Across the Curriculum **211**

Weaving together literature, poetry, social studies, and history, intermediate teacher Karen Halverson describes how reading, writing, discussion, personal reflection, and creative expression come to life when kids tackle issues involving social justice and historical and cultural perspectives. With a firm foundation in the research process, inquiry is a way of life for these fifth graders.

Works Cited **249**

Video Links

See inquiry in action with these snapshots of classroom instruction during researcher's workshop. Video clips are featured throughout the book to share specific lessons and practices and to illustrate the inquiry process across different grade levels and content areas.

▶ Researcher's Workshop

- Revisit and discuss essential questions and enduring understandings.
- Present information and take it public.
- Get started with independent research.
- Record important information and thinking.

▶ Reading and Writing in Support of Inquiry

- Share and talk about books.
- Observe, wonder, and learn about real stuff.
- Use observations and websites to create field notes.
- Watch a child teach how to record field notes.
- Explore and share ways to write to inform.
- Share a field guide.
- Introduce design techniques.

▶ Inquiry Across the Grades

- Research an essential question. (Second grade)
- Create “thick” and “thin” questions for research. (Third grade)
- Read, analyze, and discuss historical sources to understand multiple perspectives. (Fourth grade)
- Engage in Socratic seminar to deepen understanding. (Fourth grade)

▶ Inquiry Across the Curriculum

- Teacher and students reflect on poetry and performance.
- Students perform slam poetry.

Video Access



Visit <http://hein.pub/ii-login> to access the online videos and online resources.

Enter your email address and password (or click “Create an Account” to set up an account). Once you have logged in, enter keycode and click “Register.” The landing page contains all the video clips. The video is listed by chapter.

Acknowledgments

This book came to fruition over many months with a veritable village of people contributing.

Lisa Fowler first inspired us to think about a book focused on kids' thinking, creative expression, and research—as she watched it all happening in Brad's classroom. We deeply appreciate her belief in our work.

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At Heinemann, designer Monica Crigler worked magic with hundreds of photos and thousands of words, so that kids' ideas and thinking shine through on every page.

The commitment and thoughtful expertise of the production team—Vicki Kasabian, Patty Adams, Michael Grover, and Sarah Fournier—made it all happen. In video and social media, Sherry Day and Brett Whitmarsh, along with Eric Chalek in marketing, turned their expertise and savvy media skills to taking this work public.

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Above all, we thank the kids who inspire us every day and made this project come to life.

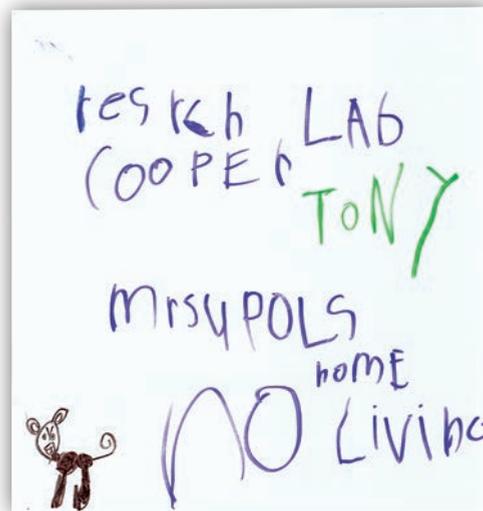
Creating a Culture for Inquiry

“My best teachers taught me most by the way they inquired about the world, toyed with ideas, and expressed their convictions.”

—Donald Graves

One day, Cooper and Tony, two rambunctious kindergartners with a penchant for animal life *Down Under*, headed back from the library, their arms overladen with marsupial books. As they scanned the classroom for an empty table, they saw the only available space was in the Home Living center. They quickly set up shop and dug in to photographs of koalas, kangaroos, and echidnas, jotting questions on Post-its and drawing their new learning. When someone entered the space to “make dinner and do the dishes,” they graciously warded him off and then created and posted a sign at the entrance. So long, Home Living!

Just a few months into kindergarten, Tony and Cooper understood that their teacher honored their curiosity and encouraged their questions. So they took matters in their own hands, comfortable in a classroom that encourages independence, to carve out a place where they could explore and wonder.





Making a Case for Inquiry

As Tony and Cooper demonstrate, engaged, curious, active kids expand their understanding, build their knowledge, and embrace a desire to learn more. In classrooms that are built around an inquiry stance, teachers support kids to

- 
- ▶ live a life full of wonder and curiosity
 - ▶ explore topics, ideas, and issues that are central to their interests and concerns, linking these to the wider world
 - ▶ tackle big ideas, essential questions, and enduring understandings as they read, write, and research
 - ▶ use comprehension strategies flexibly to turn information into knowledge and actively use it
 - ▶ read and respond critically with an inquisitive mind and a skeptical stance
 - ▶ interact with text, media, resources, artifacts, teachers, and one another
 - ▶ research a vast array of topics of interest and importance
 - ▶ make thinking visible to demonstrate understanding
 - ▶ bathe content learning in rich talk and discussion
 - ▶ think creatively to express and share new learning
 - ▶ engage in collaborative inquiry and action.

The teachers in this book weave these practices throughout their teaching every day. In planning our inquiries, we account for topics, skills, and content that stem from district and state curriculum and standards as well as from kids' individual passions and curiosities. In conventional content instruction, "coverage" of the subject matter has been the goal. In inquiry-based classrooms, deep, meaningful learning—and sometimes action—is our mission. We discourage what we call a curriculum of "mentioning," covering facts and information in a cursory way. Instead, we center inquiry around content-related big ideas, essential questions, and enduring understandings, and connect these with real-world, real-life issues. In classrooms like these, kids burst with enthusiasm and energy for learning and wondering. They can't resist taking learning into their own hands as Cooper and Tony did when they switched out the Home Living center for a research lab. Student agency and independent thinking thrive when kids are passionate about a topic, and we encourage them all the way.

Inquiry Approach	vs.	Coverage Approach
Question/problem driven		Assignment driven
Student voice and choice		Teacher selection and direction
Interaction and talk		Quiet and listening
Student responsibility		Student compliance
Authentic investigations		Teacher presentations
Purposeful learning		Getting a grade
Collaborative work		Solitary work
Strategic thinking		Memorization
Cross-disciplinary issues		One subject at a time
Multiple resources		Reliance on a textbook
Multimodal learning		Verbal sources only
Using tools/procedures of a discipline		Hearing the findings of a discipline
Student as knowledge creator		Student as information receiver
Teacher as model and coach		Teacher as expert and presenter
Caring and taking action		Forgetting and moving to the next unit
Performance-based assessments		Classroom and standardized tests

(Adapted from Harvey and Daniels 2015)



Inquiry with Researcher's Workshop

In inquiry-based classrooms, researcher's workshop happens each and every day. Just as with reader's and writer's workshops, researcher's workshop is carefully structured and includes explicit instruction in research strategies and the inquiry process. In addition, researcher's workshop

- provides an authentic, practical context for reading, writing, drawing, talking, listening, and creating
- fosters personal engagement and ownership for every kid
- encourages kids to build knowledge as they use reading, writing, and thinking strategies in the service of learning.

During researcher's workshop, we sometimes focus our inquiries on topics that are part of a district-mandated curriculum unit. At other times we might explore a common topic, driven by kids, that's of particular local or current interest. The inquiries shared in this book are primarily curricular in nature but with plenty of room for kids to investigate on their own. When it comes to curricular inquiries, some may extend over several weeks. To make sure kids have enough time to explore their topics in depth, often teachers alternate science and social studies. They may spend two or three weeks on a science unit and the next few weeks on social studies. Others may integrate teaching science and social studies together. But either way, kids need plenty of time to read, write, and think about content to build knowledge and actively use it.

Flexible Inquiry Framework

The inquiry framework on the following pages demonstrates what teachers and students may do during each phase of the process. It's important to note that the inquiry phases are recursive, not linear. We may spend a week on immersion and move into investigation, only to circle back to more immersion. For instance, kids ask questions during the immerse phase. During coalesce, they can't resist taking their learning public. The purpose of this framework is merely to show the overall progression of kid-centered research. Once kids have internalized the routines and practices in the framework, they have their own blueprint for how to find things out. These are real-life, twenty-first-century strategies that kids will use for years to come. Just ask their parents.

As one second-grade parent commented when visiting his child's classroom, "As a scientist, this is exactly what I do all day, every day. I ask some questions, do some reading to find out what I need to know, write it up, and then share it with colleagues. It's just like what's happening in this classroom."



Inquiry Framework for Primary Grades

Inquiry units follow this four-phase learning sequence—Immerse, Investigate, Coalesce, and Take Public. Here you see the big picture. To make the inquiry process more accessible to teachers and kids, we take a gradual response approach described in the next chapter about researcher’s workshop.

STAGE I. IMMERSE Invite curiosity, build background, find topics	
Teacher	Students
<ul style="list-style-type: none"> ● Connect curriculum topics to kids’ interests and experiences ● Collect and organize resources: picture books, photos, trade books, artifacts, charts, magazines, and online sources ● Immerse kids in topic and encourage questions and responses 	<ul style="list-style-type: none"> ● Connect new information to their background knowledge, lives, and experiences ● Explore, experience, and learn about the topic using texts, visuals, and artifacts related to the topic ● Listen, read, talk, view, draw, and write to respond and wonder
STAGE II. INVESTIGATE Develop questions, search for information, and discover answers	
Teacher	Students
<ul style="list-style-type: none"> ● Demonstrate ways to read, view, and wonder about information ● Show how to merge thinking with new information ● Model learning from visual and text features ● Demonstrate how to ask and answer questions 	<ul style="list-style-type: none"> ● Read, write, talk, and draw to wonder about new information ● React, respond, and merge their thinking as they learn new information ● Notice and record information from features ● Develop questions and read/view to answer them
STAGE III. COALESCE Intensify research, synthesize information, and build knowledge	
Teacher	Students
<ul style="list-style-type: none"> ● Teach paraphrasing information ● Show how to infer and visualize ideas and information ● Show ways to summarize information and add your thinking ● Connect student learning to enduring understandings and essential questions 	<ul style="list-style-type: none"> ● Put information into own words to understand it ● Infer and visualize from a variety of features and in different genres ● Express learning in original ways ● Come to their own understandings of EUs and EQs
STAGE IV. TAKE PUBLIC Share learning, demonstrate understanding and new insights. Take action	
Teacher	Students
<ul style="list-style-type: none"> ● Establish expectations for projects and ways to respond to and assess them ● Model possibilities for final projects and ways to take action ● Help kids articulate their learning process ● Provide opportunities for kids to respond to one another’s work to build a community of learners 	<ul style="list-style-type: none"> ● Demonstrate understanding and learning through writing and drawing posters, digital texts, picture books, and so on ● Become teachers as they share knowledge with others through projects ● Come to care about their learning and take action

(Adapted from Harvey and Daniels 2015)

Inquiry Framework for Intermediate Grades

Researcher’s workshop, the teaching scaffold for content-area inquiries, is built on this inquiry framework.

STAGE I. IMMERSE Invite curiosity, build background, find topics	
Teacher	Students
<ul style="list-style-type: none"> ● Plan instruction and teach with central concepts and focus questions in mind ● Gather and organize materials (trade books, picture books, articles, photographs, videos, websites) ● Engage kids in interactive read-alouds ● Model personal responses, demonstrate strategy use, and share thinking ● Demonstrate leaving tracks of thinking and note-taking ● Immerse kids in picture book clubs 	<ul style="list-style-type: none"> ● Read, write, talk, listen, observe in small groups, partners, large groups, and independently ● Turn and talk in response to instruction ● Get engaged and develop familiarity with the topic ● Acquire vocabulary and concepts ● Access background knowledge and react to information with questions, connections, and the like ● Read picture/trade books and record information, questions, and responses
STAGE II. INVESTIGATE Develop questions, search for information, and discover answers	
Teacher	Students
<ul style="list-style-type: none"> ● Model reading and thinking with texts that focus on unit-of-study concepts ● Demonstrate how to ask and answer questions ● Demonstrate a variety of techniques to access information and respond to it <ul style="list-style-type: none"> ◆ Coding text to hold thinking ◆ Note-taking ◆ Using text features to gain information ◆ Leaving tracks of thinking on Post-its and response forms ● Develop focus questions and read with a question in mind 	<ul style="list-style-type: none"> ● Read, write, talk, and think about information ● Read to find the answers to their questions ● Read, gather, and respond to information that interests them ● Use evidence and information to distinguish between reader’s thinking and author’s thinking ● Practice all the above strategies and techniques in large groups, in small groups, with partners, and independently ● Develop questions and read to address them



STAGE III. COALESCE Intensify research, synthesize information, and build knowledge

Teacher	Students
<p>Model instruction to:</p> <ul style="list-style-type: none"> ● Develop focus questions and read with a question in mind ● Gather details and text evidence that support bigger ideas ● Infer answers to questions that aren't answered in the text ● Show how to read to get the gist ● Summarize and synthesize information in a variety of ways ● Connect student learning to enduring understandings and essential questions 	<ul style="list-style-type: none"> ● Develop questions and read to answer them ● Use text evidence to infer the answers to questions that aren't answered ● Seek out additional sources to address unaddressed questions ● Use evidence and details to support big ideas ● Read to get the gist ● Develop their own take on EUs and EQs

STAGE IV. TAKE PUBLIC Share learning, demonstrate understanding and new insights. Take action

Teacher	Students
<ul style="list-style-type: none"> ● Establish the expectations for sharing ● Suggest ways kids might share their learning and take it public. Possibilities include but are not limited to the following: <ul style="list-style-type: none"> ◆ Summary responses—Short responses (one or two pages) that merge the information learned with the writer's thinking ◆ Teaching posters—Posters that summarize learning and teach new information through writing and illustrations ◆ First-person journals, diaries, and letters—Accounts, written from one person's perspective that weave together information and historical narrative ◆ Picture books—Informational books and narrative nonfiction that teach about a certain topic ◆ Question webs—Group webs where kids collaborate to answer related questions ◆ Newspaper, magazine, and online articles—Journalistic accounts that summarize information, including the bigger ideas ◆ Essays—Written pieces about ideas, issues, and perspectives ◆ Videos—Media projects that synthesize the information ◆ Wikis—Online multimedia platforms for sharing writing, voice, and art ◆ PowerPoint slides—Digital capsules of information for oral presentations ◆ Digital books—Online informational or narrative summaries 	<ul style="list-style-type: none"> ● Create projects that demonstrate their learning and understanding, either those suggested by teachers or those they think of themselves ● Become teachers as they take their thinking public and share their new knowledge with others ● Articulate their learning process and reflect on it ● Discover and consider new questions spurred by sharing with each other ● Take ownership of what they are learning, come to care about it, and take action

Six Cornerstones of Inquiry

“Asking authentic questions, that is, questions . . . to which there are not predetermined answers, is extremely powerful in creating a classroom culture that feels intellectually engaging. Such questions allow students to see teachers as learners while fostering a community of inquiry.”

—Ron Ritchhart, “The Real Power of Questions”

We subscribe to Vygotsky’s idea that “children grow into the intellectual life around them” (1978, 88). It’s on us to create an environment for inquiry that inspires kids to explore, investigate, and want to learn more. Six cornerstones that foster this kind of active, spirited, all-in learning include

- Curiosity
- Workshop
- Content
- Comprehension
- Collaboration
- Classroom environment

In the following pages, we share our vision for how these cornerstones create and shape the classroom environment, and include specific practices that encourage each of these.

Cornerstone 1. Curiosity

E. B. White reminds us to “always be on the lookout for the presence of wonder.” When kids know their thinking and ideas matter, wondering is irresistible. In the classroom discovery center, kids scour recent articles about a dinosaur discovered just a few miles away. They preview an online newscast and read about the Torosaurus, sharing this exciting find with their classmates. First graders studying Japanese culture explore artifacts and photographs and interview a sushi chef. Fifth graders explore questions about equality, social justice, and equal rights as they study American history. They investigate their questions from a historical perspective, expressing their ideas in writing and art.

When kids are compelled by what they are learning and eager to know more, they develop what Tishman, Perkins, and Jay (1995) call a “strategic spirit.” They define this as “a special kind of attitude encouraged in a culture of thinking, one that urges students to build and use thinking strategies in response to thinking and learning challenges” (1995, 3). Kids open their minds and hearts, wake up to possibilities, and exude an eagerness to ask questions and make sense of the world. When we foster a strategic spirit in our classrooms, the environment is rich with investigation, discussion, and collaboration.

We’ve said it before and we will say it again: Passion and wonder are contagious. We begin by modeling genuine curiosity about our world—what will happen with the simmering volcano in Indonesia?—and kids jump in with their comments and questions. We’ve never known a kid we can’t hook onto something in the real world. A sense of possibility pervades the classroom and kids soon realize that the more we learn, the more we wonder. Questions abound and engagement soars, all day long. Even early in the morning, as we pick the kids up and walk them into the building, they burst with stories and queries. We don’t just say great thinking and move on; we collaborate with them, showing how they can address questions with quick research and sharing how they can find out more. They know their thinking really does matter.

For further reading:

The Curious Classroom
by H. Daniels

Comprehension and Collaboration
by S. Harvey and H. Daniels

Creating Cultures of Thinking
by R. Ritchhart

Understanding by Design
by G. Wiggins and J. McTighe

Curiosity in Action

Discovery center. Fourth and second graders, curious about fossils, team up to create an interactive “museum” in the classroom. Kids can’t wait to get their hands on “real stuff.” A discovery center has artifacts that relate to ongoing research and curricular inquiries. Kids identify and label specimens, create brochures, and set up activities to engage visitors.



This second grader creates her own discovery center at home, complete with a sign hanging from the tabletop that reads “Diskuvering Senter” (sic).



The discovery center fossil display includes field guides and observation sheets visitors can use for investigation.

Real-life experiences. A field trip, a talk from an expert, or simple immersion in a variety of related resources can inspire kids to wonder and ask questions.

Artifacts stoke first graders' curiosity. They jot new learning and questions about them.



Open-ended explorations immerse second graders in a new topic. Questions abound as kids figure out what bird built the nest, what materials were used to make it, and where it might have been located.





Reflecting on issues. Fifth graders ask authentic questions that emerge from their study of history. Kids' curiosity and questions can lead them from simple information to the problems or issues behind the facts. With curiosity in overdrive, they dig deep, responding with art and essays.

Who Had Equality?

Many of our founders like George Washington and Thomas Jefferson had many, many slaves, which hardly represents all men being equal. Actually, Thomas Jefferson had over 50 slaves while writing the Declaration of Independence. Why would they do this? Are they against equality or with it? . . .

There are so many questions about our past that we can't answer, but the ones that we can't answer are the important ones. So all the thoughts that are sitting in the back of our mind about who should have had equality, all of the questions you want to ask but are answerless, dare to ask them. Bring them out because you never know whether your thoughts and opinions could change the world! Look at our past mistakes and use them as inspiration to go forward.

In this excerpt from his essay "Who Had Equality?" a fifth grader explores the struggle for equality and equal rights throughout American history.



Kids' artwork expresses their take on issues such as equal rights.



Cornerstone 2. Workshop

We believe that workshop—a teaching approach based on an apprenticeship model—provides children with both the support and the freedom to become independent, thoughtful, agentive learners. The workshop environment fosters curiosity, comprehension, critical thinking, and collaboration because there are long blocks of time allotted for kids to read and write extensively as well as research content and talk about it. Teachers model their own process first and then empower kids to make decisions about their own learning.

Over time we have come to believe that kids should be in workshop all day long—not just during literacy time, but also when studying science and social studies. And even for math—although don't come to us for that one! Since we know and love reader's and writer's workshops for reading and writing, why not researcher's workshop for social studies and science? In researcher's workshop, kids read and investigate content-area topics. We share lessons to teach information, ideas, and issues in science, history, and social studies. When kids are engaged in a unit of study or inquiry, they respond by talking, drawing, making, writing, and researching further about what they learn. They actively use their knowledge as they share and teach others. Most of the inquiries that you see in this book take place in researcher's workshop.

For further reading:

That Workshop Book
by S. Bennett

The Art of Teaching Writing
by L. Calkins

Building a Literate Classroom
by D. Graves

What's the Best That Can Happen?
by D. Miller

Foundations of Workshop

Whether it's reader's, writer's, or researcher's, workshops in an inquiry-based classroom are organized around the following:

Access. Learning doesn't happen in a sterile environment. Kids need access to books and other resources, to materials that let them creatively respond, to content resources that support their curricular learning and spark their curiosity.

Choice. Beyond the constraints of mandated curriculum, kids need to be given choice—of readings, of forms of response, of topics to explore.

Response. Kids need ways to express and shape their thinking. Responding to what they are learning—by talking, drawing, building, performing—gives them a platform for their ideas.

Volume. We learn to read by reading, to write by writing, to research by researching. A lot.

Time. A successful and satisfying reading, writing, or research experience requires time—time to lose yourself in a book, to mess around with ways of expressing your ideas, to follow a concept or idea to the next step.

Ownership and engagement. Giving kids choice, access, and opportunities to respond; encouraging them to read, write, and research a lot; and providing the time to do it all creates engaged learners who take responsibility for their learning because they own it.



Workshop Structure

Since Donald Graves' early experiments with writer's workshop (Graves 1983), many permutations of writer's workshop (also called writing workshop) and reader's (or reading) workshop have evolved. However, the structure of the workshop has remained pretty much the same over time. Workshops typically last about an hour with the following elements in place:

- Explicit Instruction
- Conferring and Practice
- Sharing

Explicit instruction. Workshops often begin with a minilesson during which the teacher models her or his thinking for a few minutes so kids know what to do and what is expected of them. Not all lessons should be minilessons, however. The more complex the lesson, the more time needed to teach it—and the more time kids need to practice. So when teaching a concept or practice for the first time, we often engage kids in what we call *launch lessons*. These take longer than minilessons because as we model our thinking, we bring kids into the discussion, and we keep them up front working under our guidance. When we think they are ready to go, we send them off to practice collaboratively or on their own. Then on subsequent days, we reiterate what we taught in brief minilessons and release kids to practice what we taught. Many of the lessons that you will find in this book are launch lessons, which we follow up with minilessons.

Conferring as kids work. The bulk of time during the workshop is devoted to kids reading, writing, and researching as the teacher moves through the room conferring with and supporting them. Conferring allows teachers to target instruction to kids' individual learning needs. It is at the heart of workshop teaching.

Sharing. At the conclusion of the workshop, the teacher gathers the kids together to engage with each other and share their learning. Discussions highlight and reiterate the goals of the day's work.

The Gradual Release of Responsibility Lesson Structure for All Workshops	
Engage	Teacher piques kids' interest and curiosity and ascertains and builds kids' background knowledge. Kids connect to their prior experiences and begin to build their knowledge.
Model	Teacher demonstrates a process, strategy, or technique, thinking aloud to help kids understand the process.
Guide	Still sitting up close as a group, kids try the process, strategy, or technique with the teacher prompting as necessary. The teacher can assess how well children understand the task and when they are ready for practice.
Practice	Kids practice collaboratively or independently as the teacher circulates and confers with individuals or small groups.
Share	Kids come together to summarize and share their learning, with discussion and dialogue that revisit the lesson goals and purposes.

Our workshops reflect a Gradual Release of Responsibility (GRR) framework. We gradually release responsibility for learning to the student. GRR is the scaffold upon which our workshops are built.

Workshop in Action

Don Graves says, “Teach the reader, not the reading; the writer, not the writing.” And we would add, the same goes for research. Learning workshop routines builds kids’ independence whether it’s reading, writing, or research.

Explicit instruction. Fourth graders participate in an interactive read-aloud, which encourages discussion and debate. These longer launch lessons are opportunities for important conversations.



Independent and collaborative practice. Time for kids to wade in and tackle a text, a task, or a problem—whether on their own or with a partner or partners—is the key to learning. As teachers, our role during practice is to confer, tailoring instruction to individual needs and interests.



During practice, a second grader shares with and gets advice from a friend.



Kindergarten teacher Kristen Elder-Rubino confers with a student during researcher’s workshop.



Second graders choose from options during independent practice.

Take thinking public by sharing. In addition to building a sense of community and validating kids' work, consistent sharing sessions augment learning. Kids not only learn a lot from one another but also get ideas they can try out themselves.



One second grader shares his writing. Kids run the share themselves, chiming in with questions, comments, or connections.



Informal small-group and partner shares happen all day and every day.

“Teachers hold the energy and vision for the inquiry.”

—Karen Halverson

For further reading:

Short Nonfiction for Teaching American History series by S. Harvey and A. Goudvis

To Look Closely: Science and Literacy in the Natural World by L. Rubin

Making Sense of History by M. Zarnowski

www.scienceandliteracy.org

Cornerstone 3. Content

In recent years, science, history, and other content areas have been relegated to the back burner in too many classrooms. The tremendous emphasis on testing and accountability has resulted in a laserlike focus on literacy, knocking other subjects right off the curricular radar screen. We believe it’s time to correct these curricular imbalances—to bring back science, history, and other content topics with a vengeance. How to do this? Ta-da! Through researcher’s workshop!

When we walk into a workshop classroom, we don’t know if it’s reader’s, writer’s, or researcher’s workshop until we look at the texts and the topics kids are reading and writing about. If all of the books and articles are on extreme weather, it’s a pretty good bet you have entered the researcher’s workshop. Kids still have ample choice in text and inquiries but they are focused on content from the curriculum. Researcher’s workshop is where we teach science, history, literature, and social studies.

Curricular inquiries are the bread and butter of researcher’s workshop. We strongly believe that we need to devote as much time to science and social studies as we do to other subject areas. Since time is always an obstacle, we suggest that we spend a few weeks in researcher’s workshop on a social studies topic and then the next several weeks on science. Some of these topics lend themselves to integration. Others not so much.

Most of the inquiries that happen during researcher’s workshop (at least in this resource) are curriculum based. We’re with Jerome Bruner (2009), who long ago argued that almost any curricular topic can be designed and shaped in a way that engages and challenges kids of varying ages (not to mention us teachers). But we relish and honor kids’ interests and passions, so we make time during or after a curricular inquiry for kids to go off and investigate their interests and questions.

As we introduce kids to the inquiry process, teachers play an essential role in maintaining the big picture of where the inquiry is going and what we want to accomplish. We see the possibilities and potential of the inquiry and have a clear sense of topics and issues that will engage and motivate kids. The whole process is carefully scaffolded to teach kids to become researchers—with important ideas and concepts front and center.

Content in Action

Inquiry can drive learning in any content area. For example, author studies in reading, mentor text analyses in writing, and primary source research in history and social studies all bear the hallmarks of an inquiry approach. And, of course, the scientific method is the embodiment of inquiry.

Second-Grade Scientists

Second-grade district science standards focus on teaching kids to think and study as scientists do. Heisey and Kucan (2011) suggest that kids learn about scientific thinking by reading about scientists and their exciting discoveries. After studying paleontology with dinosaur finder Mary Anning and snow crystals with Snowflake Bentley, kids are ready to become ornithologists. With John James Audubon as a mentor, they observe and research local birds, set up bird feeders to watch bird behavior, and create field guides to share with their families.

Thinking and learning like scientists. Kids are immersed in science experiences including close observation, sketching and writing about what they are learning, studying just like practicing scientists do. To provide these in-depth experiences, we connect kids with experts and specialists, online resources, and real-life observations.



Specimens and artifacts from the local university allow kids to explore models of extinct animals and stone tools as part of a unit on paleontology and fossils. They create their own museum for visitors to the classroom.



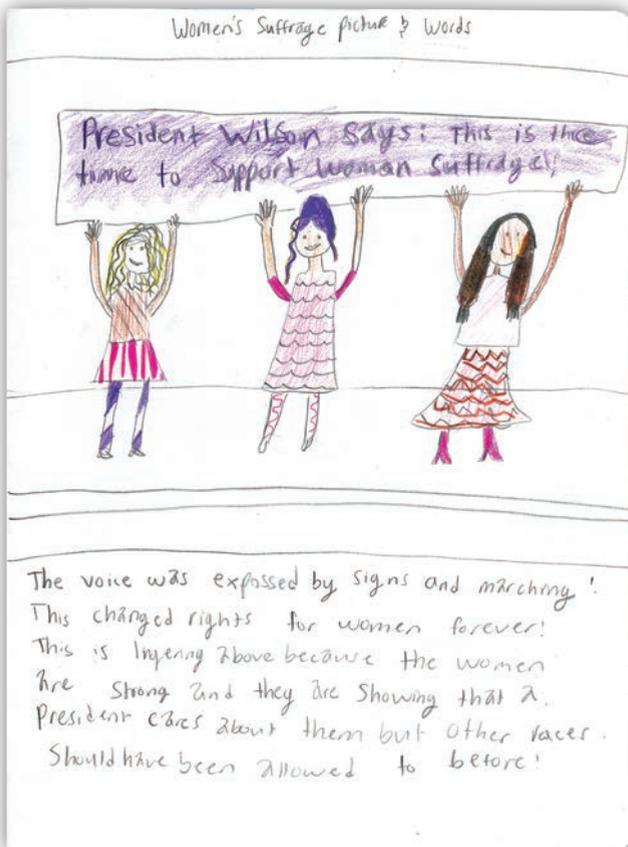
Kids observe birds close up, with bird feeders hung right outside the classroom window. Observation fuels their study as they emulate scientists like John James Audubon.

Reading, writing, and thinking in social studies and history. For us history buffs, history is all about “enduring human dramas and dilemmas, fascinating mysteries, and an amazing cast of historical characters involved in events that exemplify the best and worst of human experiences” (Bain 2007). But too often kids experience social studies and history as a dull slog through a mountain of facts in the textbook.

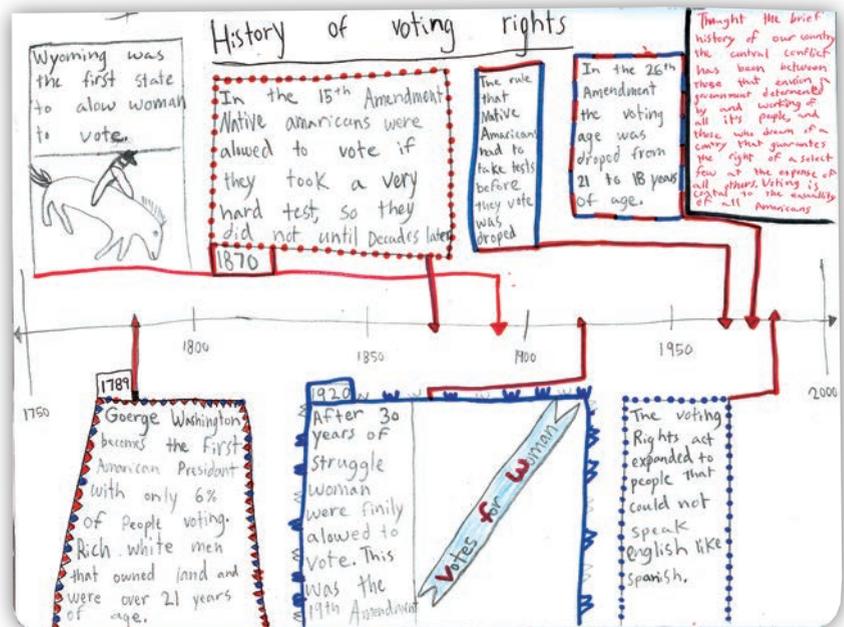
Fourth- and Fifth-Grade Historians

In this inquiry-based classroom, the focus is on understanding multiple perspectives, as students study Westward Expansion, the American Revolution, and so on. Kids delve into primary sources, videos, articles and blogs, TED talks, artistic images and photographs, websites, and both historical and realistic fiction, all of which contribute to a more accurate picture of what happened in history as well as what’s going on in the world right now.

Karen’s lesson books function as notebooks for researcher’s workshop.



Lesson books hold intermediate kids’ written responses, artistic representations, poetry, and everything else about class content topics. Like researcher’s notebooks, they provide an ongoing record of evolving thinking and learning over time.





Cornerstone 4. Comprehension

You can't teach content without teaching kids how to think about it. Comprehension is at the core of our teaching. We teach comprehension across the day and throughout the year to foster understanding and engagement, and to build knowledge. Cervetti, Jaynes, and Hiebert (2009) suggest that knowledge building is the new frontier in literacy instruction, because "reading instruction is more potent when it builds and then capitalizes upon the development of content knowledge." Strategies are tools kids use to make meaning when they read, hear, and view. Comprehension instruction deepens learning in different disciplines, in science, social studies, language arts, and so forth. Throughout the day in all workshops, kids use thinking strategies such as these to analyze, debate, discuss, respond, generate new knowledge, and take action.

- **Monitor understanding** Kids learn to recognize when information makes sense, when it doesn't, and adjust to make meaning. Kids learn to listen to their inner voice as they read.
- **Activate, access, and connect to background knowledge** Kids connect to what they already know and learn to recognize when new knowledge changes their thinking. As P. David Pearson says, "Today's new knowledge is tomorrow's background knowledge" (2006). It's the foundation that allows kids to gain insight and understanding, and even take action, through reading and learning.
- **Ask authentic questions** Curiosity is at the heart of teaching and learning. Questioning is the strategy that propels readers forward. Kids' questions launch their inquiries. Honoring kids' thinking and questions creates a classroom rich with possibilities and opportunities for learning.
- **Infer and visualize** Kids read between the lines, discern themes and important ideas, and deepen understanding; visualizing brings written words to life. Inferring is the bedrock of comprehension—it's what adds richness and depth to our understanding as we encounter texts, images, videos, and many other resources.
- **Determine importance** Kids sort and sift information to come up with the most important ideas. Barraged with information 24-7, it's essential for kids to shape what they are learning into their own thoughts.
- **Summarize and synthesize information and ideas** Kids process and distill information to understand it and make it their own. They add to their store of knowledge, merging new information with what they already know. We may come to understand a new perspective, a new line of thinking, and come up with original ideas based on what we read, listen to, and view.

For further reading:

Strategies That Work, 3rd edition,
by S. Harvey and A. Goudvis

The Comprehension Toolkit series
by S. Harvey and A. Goudvis

Reading with Meaning, 2nd edition,
by D. Miller

■ A Comprehension Continuum

Acquiring and actively using knowledge provides a strong foundation for fostering understanding. The Comprehension Continuum (Harvey and Daniels 2015) illustrates a whole spectrum of comprehension possibilities, from an emphasis on literal questions and retellings to strategic thinking that encourages

Comprehension Continuum

Answers Literal Questions	Retells	Merges Thinking with Content	Acquires Knowledge	Actively Uses Knowledge
<p>Answering literal questions shows that learners can skim and scan for answers, pick one out that matches the question, and have short-term recall.</p> <p><i>Only demonstrates surface understandings.</i></p>	<p>Retelling shows that learners can organize thoughts sequentially and put them into their own words. Shows short-term recall of events in a narrative and bits of information in nonfiction.</p> <p><i>Does not, in and of itself, demonstrate understanding.</i></p>	<p>Real understanding takes root when learners merge their thinking with the content by connecting, inferring, visualizing, questioning, determining importance, synthesizing, and reacting to information.</p> <p><i>Understanding begins here.</i></p>	<p>Once learners have merged their thinking with the content, they can begin to acquire knowledge and insight. They can learn, understand, and remember.</p> <p><i>Shows more learning and robust understanding.</i></p>	<p>With new insights and understandings, learners can actively use knowledge and apply what they have learned to other experiences and situations. They expand their understanding and may even take action.</p> <p><i>Understanding used for problem-solving and acting.</i></p>
Teacher Language	Teacher Language	Teacher Language	Teacher Language	Teacher Language
<p>What is ____?</p> <p>Where did ____?</p> <p>Who was ____?</p> <p>How did ____?</p> <p>How many ____?</p>	<p>Tell me what happened.</p> <p>What was the story about?</p> <p>Retell what you read.</p> <p>What comes first, second, third?</p> <p>When did ____?</p>	<p>What do you think?</p> <p>What did you learn?</p> <p>What does this remind you of?</p> <p>What do you wonder?</p> <p>What do you visualize?</p> <p>What do you infer?</p> <p>What is this mostly about?</p> <p>What makes you say/think that?</p> <p>How did you come up with that?</p> <p>What, if anything, confuses you?</p>	<p>What did you learn that you think is important to remember?</p> <p>Why does it matter?</p> <p>What do you think the author most wants you to get out of this?</p> <p>What evidence can you cite to make your claim?</p> <p>What do you think are some big ideas here?</p> <p>What difference does it make?</p> <p>How would you evaluate this information?</p>	<p>What do you want to do about this?</p> <p>Why do you want to take action?</p> <p>How might you take action?</p> <p>Is there a way you can get involved?</p> <p>How do you think you can help?</p> <p>How would you convince others of your point of view?</p> <p>What is your plan?</p> <p>How might you engage the help of others?</p>

(Adapted from Harvey and Daniels 2015)



actively using knowledge in a myriad of ways. The continuum is not sequential in nature but rather a continuum of sophistication, moving from literal understanding to the active use of knowledge. It illustrates how learners comprehend and reflects the language teachers use to scaffold kids' thinking depending on different purposes for reading and responding.

■ **From Strategic Reading to Critical and Creative Thinking**

Strategic reading and thinking, as described in the middle column of the continuum, are a bridge to active and engaged learning on the right side of the continuum (Durham 2009, personal communication). Strategic reading refers to thinking about reading (and also viewing and listening) in ways that enhance learning and understanding.

Answer Literal Questions and Retells

The left side of the continuum, answering literal questions, is too often where comprehension begins and ends—kids experience end-of-the-chapter questions, test-prep exercises, and recitation sessions where the teacher asks questions and kids respond. Retelling, the next point on the continuum, involves recounting events in a narrative or recalling factual information. Although literal understanding of information and an ability to restate facts or events in a story is important, comprehension is much more than “just the facts.”

Merge Thinking with Content

Authentic comprehension and understanding happen when kids use strategies such as monitoring, asking questions, inferring, and determining what's important to merge their thinking with content. Kids activate what they already know and merge it with new information, turning that information into knowledge (Harvey and Goudvis 2017). As kids inquire and investigate with content topics, opportunities for genuine learning happen.

Acquire Knowledge and Actively Use Knowledge

Learning, understanding, and remembering are active, intentional processes. It goes without saying that kids construct their own knowledge. We can't do it for them. When they do this, they often take their learning in original and unforeseen directions and transfer their knowledge to new situations and topics. Kids develop their own take on an issue or problem. Actively using knowledge engages us in discovery and leads us to imagine possibilities. It enables us to see different sides of an issue and develop empathy and compassion that lead to action based on what we have learned and believe. Kids begin to take their knowledge public, teach others, and put it to use in the world.



Critical and creative thinking. When kids think critically, they are analytical and reflective, and they entertain a variety of different perspectives. Kids can't swallow hook, line, and sinker everything they read, hear, or view. In a 24-7 info-culture bursting with “fake news” and “alternative facts,” not to mention nonstop interactions on social media, it's more important than ever for kids to read, view, and listen with a critical eye and a skeptical stance. And they need to engage in meaningful dialogue—with their peers, parents, teachers, and, eventually, the big, wide world out there.

Creative thinking (as defined by Sternberg and Williams 1996, quoted in Vinton 2018) happens when kids “imagine, explore, synthesize, connect, discover, invent, and adapt.” To this list, we'd add open-ended, expansive, out-of-the-box thinking. Kids are encouraged to imagine and invent ways to express themselves through art, music, poetry, and drama. Our mantra is: What we envision, we can create.

Both critical and creative thinking are essential twenty-first-century skills. According to Johnston (2004), kids who have a sense of agency have confidence in their own abilities to make things happen. Whether it's sharing insights about the themes in a picture book, or composing and performing in a poetry slam presentation, agency matters.

We teachers are the critical and creative thinkers-in-chief, building the classroom culture so these kinds of thinking flourish. As kids create artistic responses, teachers are right there, drawing and sketching along with them. When kids decide to take a stand on an issue, they learn how to persuade others or advocate by taking action. What's most important is that we demonstrate taking risks and stretching out of our comfort zones—and then the kids take it from there.

To foster critical and creative thinking, we model and share practices that encourage kids to

- reread, rethink, and reflect
- adopt a skeptical stance
- look beneath and beyond the information given to analyze, interpret, and gain insight
- ask probing questions about information, ideas, evidence, and so forth
- imagine the world from multiple perspectives and develop empathy
- suspend judgment and give credence to varied opinions, interpretations, and ideas
- synthesize information and ideas across disciplines
- create their own take on information and issues, imagine possibilities, and formulate original interpretations
- integrate thinking to see all facets of a problem
- create artistic, musical, poetic, and dramatic expressions of learning and understanding
- value out-of-the-box thinking and learning, honor imagination and invention
- engage in open-ended conversation that builds on others' ideas and thoughts
- develop world awareness: be a global citizen aware of our impact on the environment and society both close to home and beyond.

Comprehension in Action

Kids showcase their understanding every time they make a comment, ask a question, participate in a discussion, or create an artistic response to what they are learning.

Simulating experiences and reflecting on them. Third graders learn about what it's like to be a refugee in a simulated refugee camp set up by Doctors Without Borders. The organization set up tents, rafts, and exhibits for visitors to experience from the inside out. Experiencing a historic or current event and then talking and writing about that experience enhances comprehension and understanding.

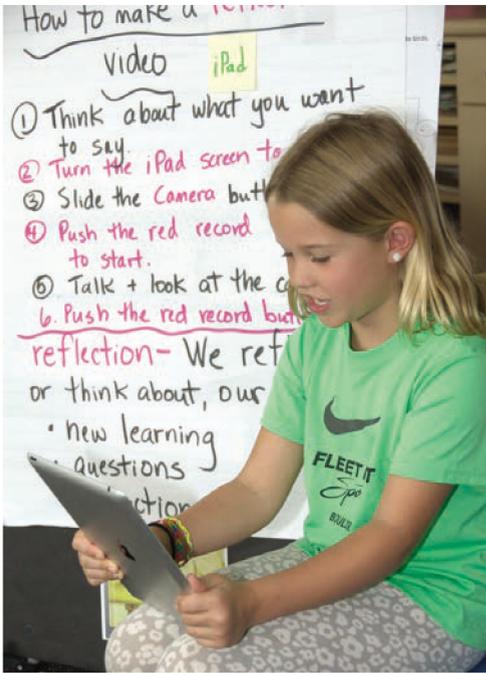


This third grader holds pictures of what she chose to take with her on her journey as a “refugee”—a cell phone, water, shoes. It’s not easy for kids to understand people whose lives are vastly different from their own. To more fully comprehend this experience, she wrote a reflection: “If you had to flee so fast you might not be able to grab anything and if you did, you would have to choose quickly. You may not be able to grab the things you love the most.”

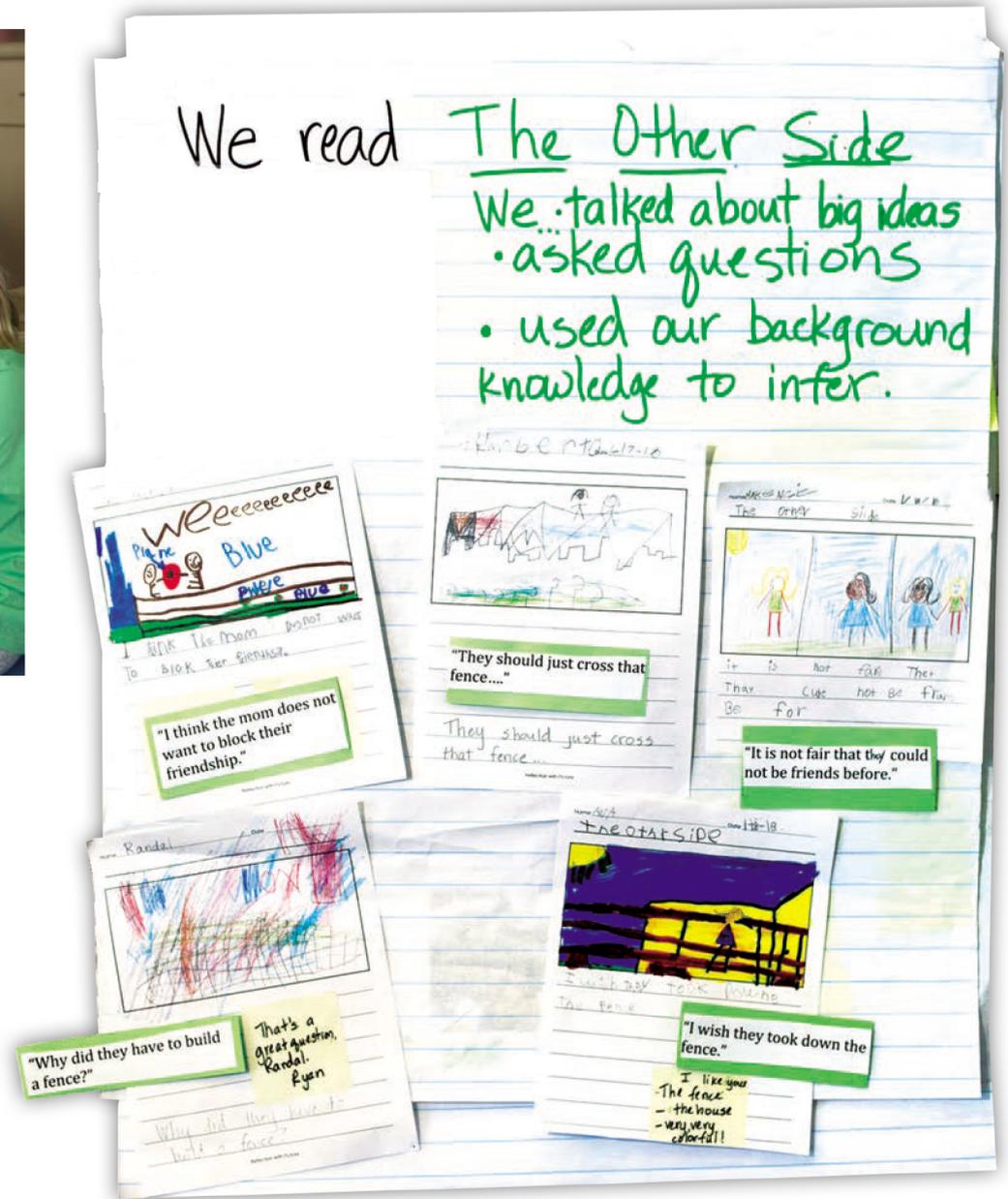
Another reflection: “My favorite station was the second station, where we were fleeing all together on a raft, and the waves were really big. I learned that the men would sit on the outside and all the women and children in the middle and it was dangerous. I learned how scary and dangerous being a refugee is.”



Reflecting on new learning to better comprehend it. Carefully selected picture books encourage kids to explore sophisticated and abstract ideas and themes with interactive read-alouds. Kids spend several weeks listening to a variety of books about kindness, fairness, prejudice, and doing the right thing, so their understanding of these significant themes deepens over time.

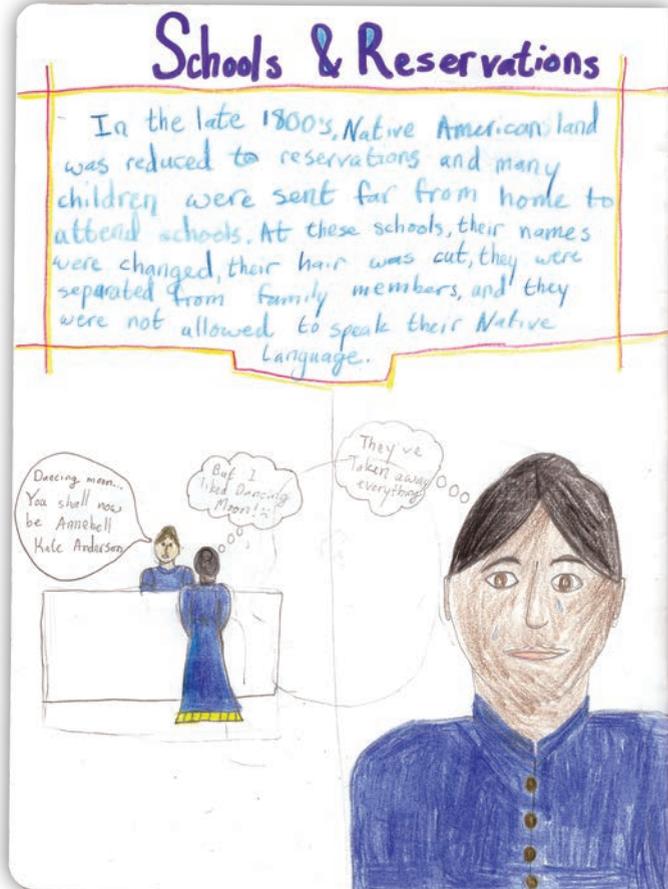
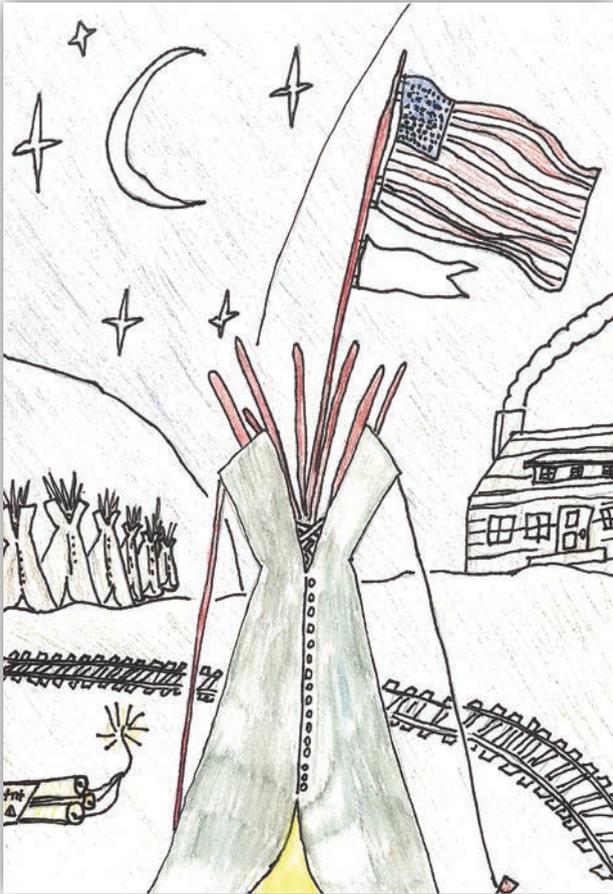


This second grader synthesizes her new learning with a reflection video, following the directions on the chart.



First graders talk about big ideas during an interactive read-aloud to more fully understand the story. After reading, they write and draw their thinking about important ideas, such as friendship.

Building knowledge. During researcher's workshop, kids demonstrate their growing understanding in many different ways—through posters, brochures, digital stories, and so on. Their creations in art and writing demonstrate their new knowledge.



Lesson books (or researcher's notebooks) hold kids' artistic and written understandings. This cover and page from two lesson books illustrate fourth graders' creative and critical thinking about encounters between Native Americans and settlers in American history.



Second graders create digital reports on weather events, such as tornadoes.



Cornerstone 5. Collaboration

Kids build relationships with each other and all adults in the environment to create a community of learners. We begin by thinking about the kinds of interactions and communication that we encourage every day in our classrooms. What matters is that kids feel welcome and are comfortable taking risks and expressing their thoughts. Mutual respect and regard for each and every person in the room is paramount. A vibrant, empathetic classroom community is far more likely when kids feel ownership of what happens every day. And remember, to have a collaborative classroom we need a collaborative staff.

Above all we focus on relationships, helping kids getting to know one another. We encourage them to take responsibility for participating in and contributing to life in the classroom, beginning on the first day of school. We also focus on the physical space and plan and create an environment that supports collaborative inquiry.

A collaborative community requires communication. As teachers we know a lot about getting kids to talk in the classroom, and we encourage far more kid talk than teacher talk. Interaction through talk is the most underrepresented form of communication in schools. Large-scale studies of intermediate grades found that “students spend only 7% of the school day in small groups where they collaborate on tasks . . . (so that) kids became much more active and involved in their learning” (Pianta et al. 2007). Studies like these suggest kids spend way too much time in passive rather than active learning.

Kids acquire and use knowledge by thinking and talking about it. To paraphrase James Britton, who said, “literacy floats on a sea of talk,” we believe it’s also true that “*understanding* floats on a sea of talk.” Individual time for reading, writing, and researching is crucial, but purposeful talk and conversation is the foundation of our teaching and kids’ learning. To foster this, we create intentional groups where kids interact and in which they have a common purpose.

■ Types of Classroom Talk

We outline these various types of classroom talk to emphasize that collaboration happens when teachers and kids co-construct meaning. The last thing we want to do is fire questions at kids in the Initiation, Response, Evaluation (Mehan 1979) mode described here. When teachers do all the talking, student curiosity, ownership, and engagement shut down. When teachers talk too much, inquiry suffers.

We have long advocated that kids adopt and adapt our teaching language as their learning language. If we want kids to listen to each other, build on each other’s thinking, engage in respectful conversations, and encourage each other in collaborative research, we need to create the conditions for this to happen.

For further reading:

Comprehension and Collaboration,
2nd edition, by S. Harvey and
H. Daniels

Choice Words and Opening Minds
by P. Johnston

Engaging Children by E. Keene

*Comprehension Through
Conversation* by M. Nichols

Types of Classroom Talk

Type of Talk	What Is It?	Good for Discussion?
Talk That Limits Discussion and Conversation		
<p>Initiation, Response, Evaluation (Mehan 1979)</p> <p><i>Purpose:</i> Teacher assesses learned facts from reading or lecture.</p>	<p>Teacher asks question with known answer. Student responds. Teacher praises or moves on to next student.</p> <p>T: Does the Nile River flow through Egypt?</p> <p>S: Yes.</p> <p>T: Excellent.</p>	<p>No. IRE promotes what Ritchhart names a “ping-pong dialogue”: a back-and-forth between teacher and students.</p>
<p>Display Question (Cazden 2001)</p> <p><i>Purpose:</i> Teacher and students review and check facts.</p>	<p>Teacher asks a question with a known answer. Student responds.</p> <p>T: What is the largest city in Colorado?</p> <p>S: Denver.</p>	<p>No. Conversation is between one student and the teacher.</p>
Talk That Supports Engagement and Inquiry		
<p>Exploratory Talk (Cazden 2001)</p> <p><i>Purpose:</i> Students develop ideas, collaborate, and recognize that talking and conversation brings better understanding.</p>	<p>Students explore ideas by talking about them.</p> <p>S1: I wonder if this fossil is an insect . . . or what is it?</p> <p>S2: It looks like it has a shell, but it could also be like a sea creature with a shell.</p> <p>S3: Yeah, I think it’s called a trilobite, but let’s check the field guide.</p> <p>S1: So is a trilobite a kind of insect?</p>	<p>Yes. Students take over and connect their thinking to the idea presented.</p>
<p>Instructional Conversation (Saunders and Goldenberg 2007)</p> <p><i>Purpose:</i> Conversation to explore ideas together as a group.</p>	<p>Classroom talk that is give-and-take. Students take turns chiming in, becoming alert to when someone is done.</p> <p>S1: Why did the pioneers think they could build their homes on Native American lands?</p> <p>T: Interesting question. What do you all think about this?</p> <p>S2: Pioneers had the idea of manifest destiny—that the country was theirs and they should take it over.</p> <p>S3: But that doesn’t make it right. After all, the Native Americans were there first.</p> <p>T: As you all suggest, there are many reasons for the conflicts between Native Americans and settlers. We’ll be exploring these different perspectives.</p>	<p>Yes. Students take over and talk, taking turns, listening, and responding to others’ thinking. And the listener has the most important job, taking notes on questions, confusions, and new learning.</p>
<p>Conversational Uptakes (Stipek 2002)</p> <p><i>Purpose:</i> Teacher scaffolds language to build from students’ approximations.</p>	<p>Teacher interjects comments to keep students’ conversation going.</p> <p>S1: Bats hunt at night.</p> <p>S2: That means they are . . . what’s the word?</p> <p>T: Nocturnal. Like raccoons. They hunt at night.</p> <p>S1: We sleep at night.</p>	<p>Yes. Conversational uptakes happen during give-and-take conversations. They promote talk for students with a range of language experience.</p>

(Mohr and Mohr 2007)



Conversation protocols. We foster collaboration through conversation. We teach specific ways to work productively, share respectfully, and engage with everyone in the classroom (and beyond). We often post language frames in a prominent place to remind kids of language they use as they work together.

Discussion is one of the primary ways we model collaborative and idea-centered conversations. It is a way to explore issues and problems, to imagine possibilities, and to think outside the box. Building kids' confidence in expressing themselves is integral to their participation in a collaborative community of learners. Sometimes kids' spontaneous conversation is productive. Sometimes it's not. We use open-ended discussion prompts repeatedly to give kids a sense

Joining a Group
<p>Student: May I join your group? Group: Sure, here's what we are doing. Student: What should I do to help? Group: Would you mind _____? How about if you _____? We really need help with _____.</p>

Sharing Respectfully
<p>Teacher: Roberto, would you like to share what you learned/think/wonder/feel? Student 1: Yes, thank you. (<i>Student shares. Then invites another.</i>) Student 1: Annaliese, would you like to share what you learned/think/wonder/feel? Student 2: Yes, thank you.</p>

Disagreeing Agreeably
<p>We want kids to feel comfortable disagreeing with peers and adults, but we want them to do it respectfully, and we need to give them the tools to do so. We teach them language frames like these: I beg to differ _____. That's interesting, I have another idea _____. I heard what _____ said, but I see it a little differently. I used to think that, but now I think _____.</p>

Turning and Talking	
What We Do	What We Say
Turn our heads to look at each other.	Would you like to go first?
Move your body to sit close to your partner.	Sure, I'll start. I think _____. What do you think?
Listen! That's the most important job.	This makes me think _____. Tell me more _____.
Take turns talking and sharing.	That's interesting _____.

Partner Reading	
What We Do	What We Say
Sit next to each other with the same book.	Would you like to read? Yes, thank you.
Decide who will read each part.	I'll read a page. You read a page.
Take turns reading and talking.	I was thinking about this picture. Do you have any connections? What are you wondering? Why? What do you think about this part? I'd like to stop and talk about this.



of agency, so they get the message that their thinking matters and learn ways to share their thinking and ideas with others. We

- encourage kids to internalize and use them independently in conversations and interactions.
- help kids understand anything they hear, see, or read more completely by prompting them to work out the meaning.

**“We learn from
the company
we keep.”**
—Frank Smith

Discussion prompts. Some question prompts we’ve adapted from Peter Johnston’s books *Choice Words* (2004) and *Opening Minds* (2011) follow. Keep in mind that these are not questions with an intended answer, but rather questions to encourage discussion and conversation.

Discussion Prompts		
Listening	Viewing	Reading
What do the words make you think about? What did you hear? What does it remind you of? What did you hear that makes you think that? What do you want to hear more about? What did you hear that is evidence for that idea? Do you agree or disagree? Why or why not?	What do you notice/observe? What does the image remind you of? What do you wonder? What do the graphics/features make you think about? What do you infer from the photo/image/graphic? Where is the evidence for that idea? What in the image makes you say or think that?	What in the text makes you say that? How do you know? What makes you think that? Tell me more about your thinking. Where is there evidence for your thinking? Where in the text did you get that idea? Who has another idea? Who might respectfully disagree? How might you explain the different interpretations? What kind of evidence does the author use? What do you think? Explain whether you disagree or agree—say some more.

(Adapted from Johnston 2004, 2011)

Collaboration in Action

Community building happens in many ways: through a variety of shared experiences and by repeatedly welcoming kids' input into classroom life.

Collaborating on space. Second graders collaborated to designate a museum exhibit area in the classroom.

Other students visit the classroom, sitting in the museum display area to learn about penguins and their egg-laying behavior.



Message board. Second graders communicate through letters, notes, and even photos on a message board. Comments, requests, suggestions, and questions on this interactive board build ownership and collaboration.





Socratic seminars. Socratic seminars are student-led conversations that begin with a question or an issue to be discussed. Fourth graders learn to run the discussion themselves.



Kids cite evidence from text and images to support their positions and responses.

Collaborative inquiry. Collective action is a powerful way for kids to celebrate the work they have done as a community, express their opinions, and take a stand.



Fifth graders engage in a “get out the vote” demonstration on a university campus, right before election day.

We are great fans of something colloquially known as “classroom makeovers”—carving out time in the few days before school starts when teachers are back at work to collaborate as a group on room setup. As a small group of willing souls moves from one room to another, each person shares his or her goals and challenges with respect to the environment. The group listens. Then we brainstorm possibilities and together come up with ideas for organizing the space. With collaboration and muscle power, voilà! What we envision becomes reality. And then it’s on to the next classroom.

For further reading:

Ladybugs, Tornadoes, and Swirling Galaxies: English Language Learners Discover Their World Through Inquiry by B. Buhrow and A. Garcia

Cornerstone 6. Classroom Environment

Before school even begins, we ask ourselves: How can we arrange our teaching space to ensure the kind of dynamic, interactive, engaged learning we envision? We set up a welcoming space for kids as they walk in the door on day one, knowing we will adapt it to kids’ needs and interests and leaving room for them to make the environment their own.

Our three priorities for making sure our classrooms support discovery and inquiry are to:

- create purposeful work spaces
- gather and organize tools and resources
- design ways to make thinking and learning visible.

Inquiry-based learning is not about a culminating project to a unit, but rather about living in a way that kids’ questions matter and about setting up classrooms that foster curiosity all day and every day.

■ Purposeful Work Spaces

There’s a productive hum as kids spread out around the room during work time. One group observes and sketches a giant cockroach in a terrarium, learning that they have been around for millions of years. Several kids illustrate poems they’ve written about a recent solar eclipse, referring to images and vocabulary on a content word wall. Yet another pair surveys everyone in the class, finding out kids’ opinions and ideas for new playground equipment.

Workspaces include:

- nooks and seating options that are responsive to kids’ personal preferences
- varied spaces for formal, large-group lessons and small-group research
- cozy nooks for quiet study or a place for a book group
- areas designed by kids.



The whole-group area is center stage. Engagement soars when students have plenty of room to share projects, create dramatizations, and even perform.

A large rug area has a lot of flexibility and comfortable spaces to accommodate small groups during work time, such as this fourth-grade book club.



Second graders weigh in with how classroom space is used. They requested a place to write to their pen pals on postcards, so the nook is stocked with materials for corresponding.



Remember to include comfortable spaces for quiet concentration in the midst of a busy day.

Creative use of space

A former storage area in the hallway morphs into a studio space with many possibilities. Flexible seating, wall space, laptops, and places to display materials and resources provide everything kids need for exploration and study. Whiteboards reflect each step in the research process: Immerse, Investigate, Coalesce, and Take Public. As inquiries unfold, kids fill the space and walls with their questions, new learning, and projects.



■ Accessible Tools and Resources

Reading, writing, and research are what we do. Appealing and accessible print and digital resources to read and view as well as materials for writing and creating give kids the tools they need when they need them. Kids assume the responsibility for keeping the room in order. They are mindful of conserving resources.



Kids sort and organize books into categories. They explain the system to the rest of the class so that everyone can help with upkeep.



Artistic expression is honored and valued, so materials are plentiful and enticing.



Ron Ritchhart describes why making thinking and learning visible matters:

“When thinking is visible in classrooms, students are in a position to be more metacognitive, to think about their thinking. When thinking is visible, it becomes clear that school is not about memorizing content but exploring ideas. Teachers . . . can see students’ thinking because misconceptions, prior knowledge, reasoning ability, and degrees of understanding are more likely to be uncovered. Teachers can then address and extend students’ thinking by starting from where they are.”

■ Making Thinking Visible

Halls and walls teach. Visual displays of co-constructed anchor charts illustrate and guide teaching and learning over time. Displays of kids’ writing and art feature a highly visible record of kids’ finished projects and in-progress thinking. When students consistently share their questions and interests, they come to know each other as learners. Collaboration becomes a way of life.

We begin the year with blank walls and bulletin boards. Why decorate with stuff from the teacher store when very soon the halls and walls will be filled with more interesting examples of kids’ learning and our teaching?

Throughout this book, kids make their thinking visible by annotating both information and thinking. Post-its, two- and three-column think sheets, and large charts are opportunities for kids to draw and write their way into understanding.

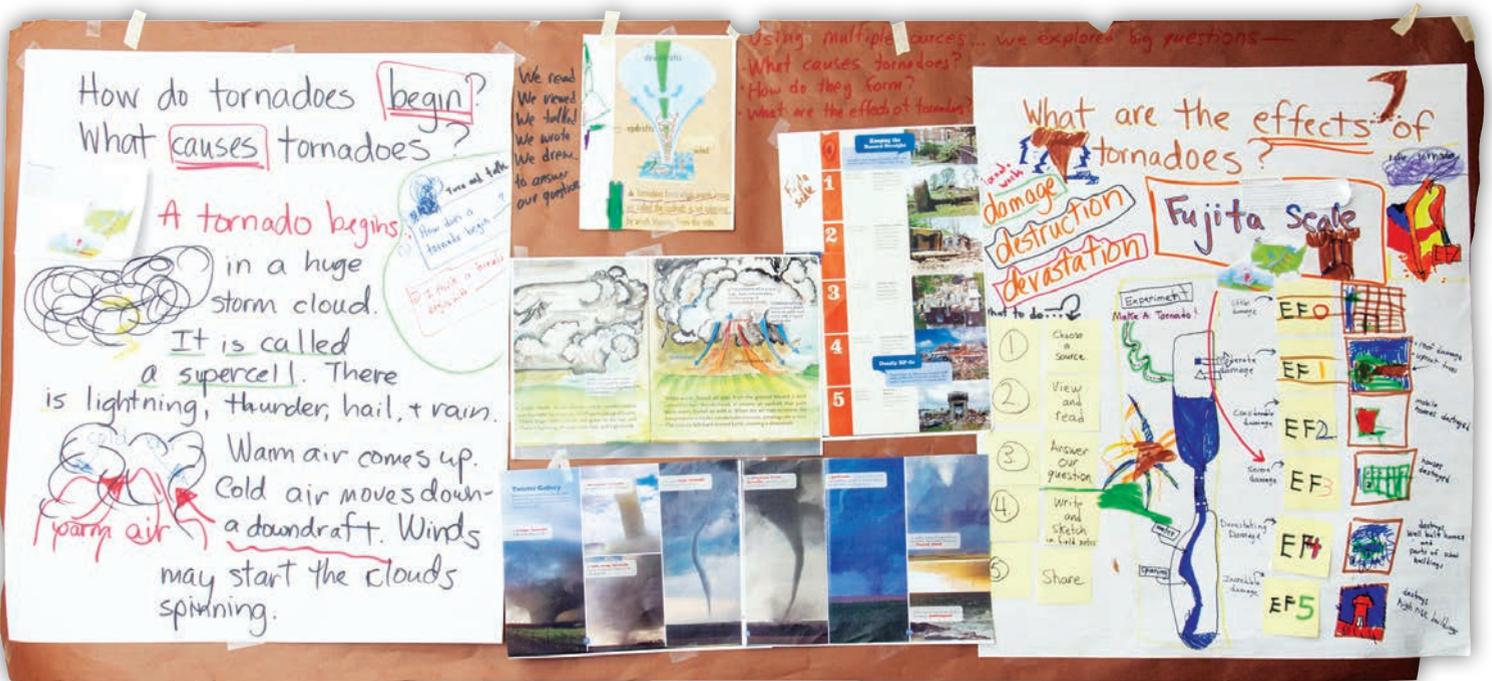
Anchor charts. Anchor charts are essential tools for teaching in ways that make kids’ thinking and learning visible and concrete. They provide an ongoing record of instruction as it unfolds each day. Charts of all kinds cover walls, easels, any place kids can see and use them. When space is a challenge, we change them up often, making sure they are relevant and useful.

Here’s a short list of options for co-constructing anchor charts:

- Include the language of instruction so kids begin to internalize it. Our teaching language becomes the kids’ learning language.
- Honor kids’ work and thinking by adding their responses to the charts. Their Post-its, responses, and ideas spark conversation and discussion.
- Send the message that we are a community of teachers and learners—our conversations and ideas are worth recording and “making visible” so we can revisit and discuss these over time.
- Keep the language clear. Charts are referred to by kids who rely on them for guiding what they do and how they talk, especially language for comprehension and thinking strategies and procedures (how to choose a book to read, how to write a picture book; steps for the research process).
- Collaborate with students. Charts are not only co-constructed (teachers and kids) but also kid-driven/-constructed. When kids create their own teaching/learning/response charts, they are assuming ownership and responsibility. Kids might list their burning questions, their discoveries, their new learning—and other kids respond.
- Provide parents and visitors to the classroom a clear, coherent idea of what we are thinking and learning and send the message that this is what matters.
- Spotlight kids’ original ideas and creative expression.



Second graders illustrate procedural charts as handy references to guide them during independent reading.



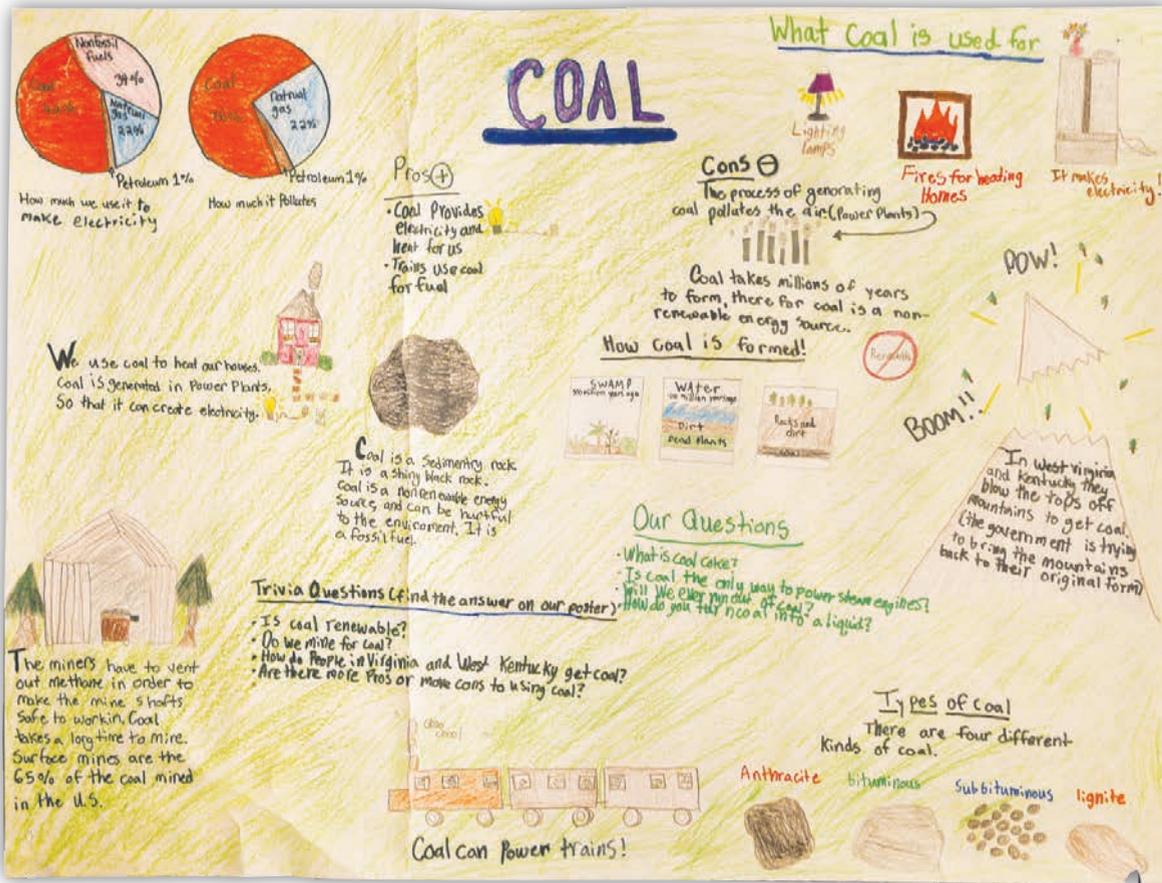
Content charts reflect new learning in an inquiry as well as responses to focus questions.

Kids' work. Gone are the days of twenty-eight nearly identical state reports posted on the bulletin board. Showcasing kids' work on walls and in hallways—both finished and in-progress—sends the message that this is their classroom and they are sharing what happens there. But it's not just about a display—it's for teaching and learning, both inside and outside of the classroom. When kids' work is visible and public, this

- provides authentic opportunities for kids to teach and learn from each other
- shows the development and trajectory of kids' progress and understanding over time
- inspires responses, reactions, and conversations among classmates, with other kids in the school, with parents and other visitors
- celebrates the intensive thinking and hard work that go into kids' efforts to take their learning public and make it attractive and engaging for readers and viewers.



Not everything we put up needs to be in “final” form. We use draft stamps or place “work in progress” signs on kids' work when they share drafts and other ongoing work. What better way to get thoughtful feedback and guidance for adding to one's work and thinking?



Fourth graders create an infographic using a variety of features and text to share information on complex topics.

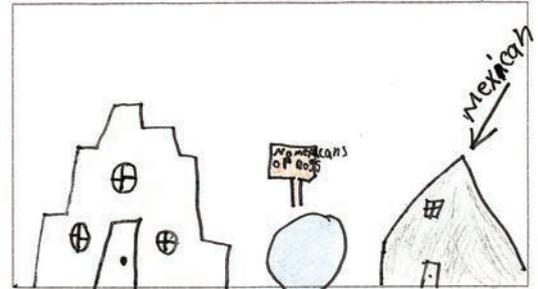


Walls are interactive, so kids respond on Post-its right on displayed work. Learning is a collaborative venture and walls are a great place to try out ideas and share in-progress thinking.

Visitors, parents, kids, and teachers take part in a collaborative conversation about the picture book *Separate Is Never Equal*, by Duncan Tonatiuh.

We post student work in the hallway for the community to read and learn from. The book *Separate Is Never Equal* is a story about school desegregation in California in the 1960s. Parents, teachers, and visitors respond with their comments on Post-its.

We read Separate is Never Equal.



This story makes me think.....

This story made me think that Sylvia's parents worked very hard to make her be able to go to the school.

We read Separate is Never Equal.



This story makes me think.....

That if you fight for something that you don't think is right, you almost always will get something good out of it. I also feel like when you express your voice, people who are scared to stand up for themselves will be grateful for you.

These are very thoughtful responses about people standing up for their rights.
Ms. T

We read Separate is Never Equal.



This story makes me think.....

about other people not only Mexicans should have a voice. Also that people try their best to take action. Also that some people are scared for deportation and immigrants can not even go to stores because they think that the police I.C.E will get them.

You all are discussing such important issues—which are happening right now!
Mia's dad