

Content Literacy



Building Knowledge Through Thinking-Intensive Learning

By Stephanie Harvey and Anne Goudvis

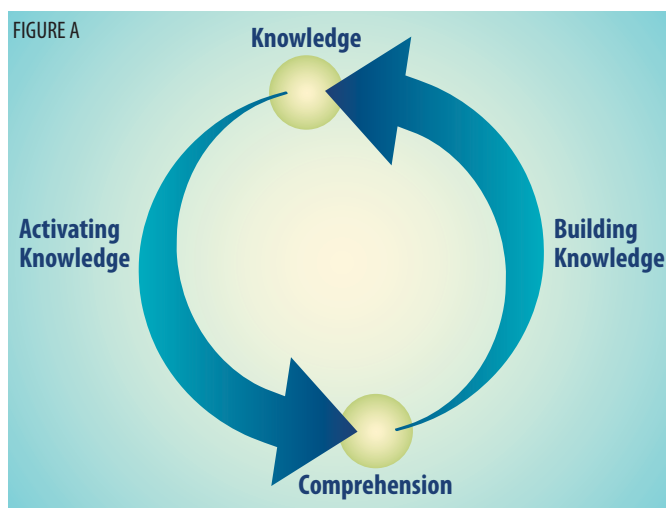
E. B. White (n.d.) reminds us to “always be on the lookout for the presence of wonder.” You can’t help but ask questions in a room that is filled to bursting with great text, stirring images, engaging artifacts, and so on. Content-rich classrooms make wondering irresistible. Stimulating environments fuel kids’ natural curiosity. Teachers who create classrooms like this instill a disposition to explore, investigate, read on, and learn more.

The real world is rich, fascinating, and compelling, and because kids are living in it, let’s replicate it in our classrooms.

We’ve advocated for teaching comprehension strategies as tools for building content knowledge for years (Harvey and Goudvis 2007, 2013, 2016). But we are convinced that conventional content instruction needs to be turned on its head. Content learning is not about slogging through textbooks, answering a bunch of questions about dates and events, or spending two periods of twenty minutes a week on science. Rather than simply skimming the surface, kids should be grappling with and constructing ideas for themselves across all content areas, 24-7. In content-rich classrooms, kids are asking questions, inferring, discussing, debating, inquiring, making things, and generating new ideas. P. David Pearson (2006a) suggests a simple motto that says it all when it comes to active learning across the curriculum: READ IT, WRITE IT, TALK IT, DO IT!

We don’t reserve comprehension instruction for the literacy block. When comprehension strategies are at the core of science, social studies, and language arts instruction, kids learn and understand more deeply, engage more completely, and build knowledge over time. In reviews of the research, Cervetti and colleagues (Cervetti and Hiebert 2015; Cervetti, Jaynes, and Hiebert 2009) argue persuasively that “knowledge building is the next frontier in reading education” because “evidence is beginning to demonstrate that reading instruction is more potent when it builds and then capitalizes upon the development of content knowledge” (Cervetti, Jaynes, and Hiebert 2009). This is a reciprocal process, as Figure A illustrates.

Researchers emphasize the knowledge-building side of this figure, which underscores the idea that when we comprehend, we add to and enhance our store of knowledge. So above all, comprehension is a knowledge-building activity (Cervetti, Jaynes, and Hiebert 2009).



Adapted from Cervetti, Jaynes, and Hiebert (2009).

P. David Pearson recently tweeted “Knowledge begets reading comprehension begets knowledge, begets RC begets K anon . . . a virtuous rather than a vicious cycle” (2015). The more content knowledge we have, the more likely we are to grow it. So we are more committed than ever to merging comprehension and content instruction across the curriculum.

Recent comprehension research supports the importance of “teaching small repertoires of strategies in more flexible ways and more collaborative contexts” (Wilkinson and Son 2011). Comprehension instruction is most effective when students integrate and flexibly use reading strategies across a wide variety of text and in the context of a challenging, engaging curriculum. Strategies such as activating and connecting to background knowledge, asking questions, inferring, visualizing, determining importance, and synthesizing are the foundation for content learning and understanding.

Thinking-Intensive Learning

Understanding content requires that kids use thinking strategies in science, social studies, literature study, and so forth. For kids to understand and remember what they learn, reading must be thinking- and learning-intensive, so say no less than the President

and Fellows of Harvard College (2007). We teach the term *thinking-intensive reading, listening, and/or viewing* even to our youngest students, so they learn right off the bat that reading is, above all, about thinking. And not just thinking per se, but asking questions, drawing conclusions from text evidence, inferring from visual and text features, and surfacing themes and important ideas.

As Art Costa (2008) says, the acquisition of knowledge is only the beginning. “The deeper [the] knowledge one has, the more analytical, experimental and creative one’s thought processes.” Acquiring knowledge is a powerful jumping-off point, but kids only get truly engaged when they have a chance to spend some real time exploring significant issues and ideas and actively using knowledge. Costa (2008) suggests, “Content literacy is all about what kids do with their new knowledge—how they make sense of it and use it in their daily lives.” So going deeper into the essential questions and bigger ideas across disciplines gives kids a much better shot at “enduring understanding” (Wiggins and McTighe 2005).

Content Literacy Practices

Here’s the good news. We have noticed that with most kids, it is the content that is seductive! We have never met a student we can’t engage in something in the real world. We’ve watched as kids marvel at a video of a Venus flytrap closing on an insect, wonder about brothers fighting brothers in the Civil War, or write letters to support the construction of a memorial commemorating the Sand Creek Massacre victims. We believe the following practices, modeled initially by teachers, are most likely to result in a classroom full of engaged, active learners who take action. In “content-literate” classrooms, kids:

- use comprehension strategies flexibly to turn information into knowledge and actively use it
- live a life full of wonder and curiosity
- read with an inquisitive mind and a skeptical stance
- interact with text, media, resources, artifacts, teachers, and each other
- merge their thinking with new learning to learn, understand, and remember it
- view nonfiction as compelling and accessible
- make their thinking audible and visible
- bathe their content learning in rich talk and discussion
- build their interest and intrigue with visuals, videos, artifacts, and interviews as well as text
- grasp the big ideas and essential questions they encounter as they read and research
- engage in collaborative inquiry and action

Researcher’s Workshop

To build intrigue, knowledge, and understanding, students read, learn about, and interact with the questions, mysteries, controversies, discoveries, and drama that are the real stuff of content learning. This kind of deep dive often leads kids to care about and act on what they are learning. But how does this happen in our classrooms? To this day, we remain big fans of reading and writing workshop. Why not researcher’s workshop? In researcher’s workshop, the teacher and kids follow workshop rituals and

routines, including teacher-led minilessons; kids practicing through reading, writing, talking, viewing, and drawing; and time built in for conferring and sharing. To immerse kids in the vast ocean of content, we use a four-phase inquiry framework for researcher’s workshop.

PHASE	TEACHERS	KIDS
<i>Immerse</i>		
Invite curiosity	Flood the room with topic-related resources	Explore, experience, and learn about the topic
Build background knowledge and intrigue	Develop essential questions and connect topics to kids’ interests and experiences as well as standards	Connect the new to the known
	Encourage kids’ questions, responses, and reactions	Wonder, react, and think to engage in the topic
<i>Investigate</i>		
Develop questions	Model how to ask questions	Keep notebooks with questions and new learning
Search for information	Model annotation and how to organize information	Annotate and keep track of their new learning
Discover answers	Model how to read, listen, and view with a question in mind	Read, talk, listen, and view a wide variety of text and online sources to learn information
<i>Coalesce</i>		
Intensify research	Model how to read for the gist and synthesize information	Engage in deeper reading and research
Synthesize information	Confer about research process and pull together findings	Reflect and monitor findings
Build knowledge	Demonstrate multiple ways to evaluate and organize information	Organize information and determine accuracy of sources
<i>Go Public</i>		
Share learning	Co-construct expectations for final projects	Co-construct expectations for final projects
Demonstrate understanding	Model and share a wide range of options for going public	Demonstrate learning and understanding in many ways
	Assess and evaluate projects	Reflect on new knowledge and the research process
Take action	Share possibilities for taking action	Take action through writing, speaking, drawing, creating, making, and so on
		Advocate for a position or cause

Adapted from Harvey and Daniels (2015), *Comprehension and Collaboration*.



1864 occurred when Colorado militia soldiers attacked a peaceful camp of Native Americans, who were under the protection of the U.S. government, and tragically slaughtered many of them, mostly women and children. The kids read interviews, historical fiction, and first-person accounts to learn about this horrific event. Once the students developed an understanding of what happened, they were outraged.

Fast-forward to current times. During their inquiry, the teacher and kids discovered a speech by the current governor, videos of Cheyenne and Arapaho descendants speaking about the massacre, and articles about an ongoing effort to establish a memorial to the Sand Creek victims near the state capitol in Denver. The students considered the pros and cons of the effort and then made their decisions, synthesizing evidence and arguments in favor of the memorial, as in this excerpt from one of their letters (see Figure B).

Exploring Science

Like scientists, young children are naturally curious. We merge science and literacy and teach kids to think, read, write, talk, draw, and create like scientists. Researcher's workshop in science workshop is hands-on and minds-on! Through interactive read-alouds, viewing, observing, experimenting, and independent reading, kids explore and build knowledge about important concepts, such as animal adaptations, habitats, and survival. Essential questions, created by the teacher and based in district science standards, launch kids into research. These frame and shape kids' own questions and emerge from the kinds of questions scientists ask, such as “How do animals adapt to and survive in their habitats?”

These essential questions are transferable to many habitats and species. For instance, in a rain forest study one child might ask how emerald tree boas adapt to and survive in the rain forest and another might ask the same question about toucans. But it's not merely about studying toucans and boas; the goal is for kids to acquire and transfer new knowledge of foundational concepts and ideas to create enduring understandings across habitats and species. As kids internalize and think about these essential questions, they build on this foundation for their own investigations. So when they next read about any animal or habitat, they think about how that animal adapts to its environment, which replicates how scientists keep big ideas and questions in mind as they think and research. With this foundation, kids tackle problems and issues in the real world and create ways to share their learning through posters, blogs, presentations, videos, letters to the editor, and so on.

Taking Action with History

Along with miners, trappers, and assorted intrepid souls from Colorado's past, Karen Halverson's class of fourth graders learned about a dark time in the state's history. The Sand Creek Massacre of

FIGURE B

Dear Legislators,

I have found that people forget what happened in history, like the Sand Creek Massacre. But people shouldn't forget what happened to the Cheyenne and Arapahoe. Colorado needs to remember history more accurately. The governor at the time, John Evans, made no attempt to apologize for the Sand Creek Massacre. Governor John Hickenlooper started us on the path of righting a wrong when he apologized in his 2014 speech to Native Americans for the treachery. After so much suffering from the shock and crisis of the Sand Creek Massacre, a memorial would start to right this wrong, help Native American descendants heal, and remind us never to make such a big mistake again.

**Sincerely,
Dale**

P. David Pearson (2006b) reminds us that “reading and writing are always better when they are tools not goals. . . . If we don't realign the current curricular imbalances, science and social studies may suffer, but ultimately reading and writing will suffer. Reading and writing are not about reading and writing in general, but about reading and writing particular texts that are grounded in particular experiences.” In classrooms where content learning is on the front burner, voluminous reading, writing, and research happen all day, every day. Kids come to care about what they learn and even take action. The implications are clear. Content matters. Thinking matters. Our democracy depends on both.



Anne Goudvis and Stephanie Harvey have enjoyed a fifteen-year collaboration in education as authors and staff developers. They are coauthors of Heinemann’s curricular resource series, *The Comprehension Toolkit*. Their latest book in the series, *Content Literacy: Lessons and Texts for Comprehension Across the Curriculum* (available in primary and intermediate editions) provides content literacy lessons designed to teach students ways to get the most out of their nonfiction

reading so they can build content knowledge and actively use it. The lessons engage students in analysis, synthesis, critical reading, and thinking across the curriculum, while integrating multiple comprehension strategies that build on the original lessons in *The Comprehension Toolkit* series.

Anne began her career teaching both primary and intermediate grades in schools on the south side of Chicago. After graduate school at the University of Illinois’ Center for the Study of Reading, she spent ten years as a staff developer for the Denver-based PEBC (Public Education and Business Coalition). The PEBC is a partnership of leaders from education and business, who support innovation in public schools. She currently works with teachers and schools around the country doing workshops, classroom demonstrations, and coaching.

After fifteen years of public school teaching, both in regular education and special education classrooms, Stephanie worked for twelve years as a staff developer, also with the PEBC. She currently serves as president of Stephanie Harvey Consulting, which provides literacy staff development to schools and school districts around the world. Stephanie conducts keynote speeches, presentations, workshops, demonstration lessons, coaching sessions and ongoing consultation to teachers, reading specialists, literacy coaches, principals, and district administrators.

Follow them on Twitter @stepharvey49 and @annegoudvis.

To continue to engage with Anne and Stephanie on this topic, please visit www.heinemann.com/pd/journal.

Cervetti, Gina, and Elfrieda Hiebert. 2015. “Knowledge Literacy and the Common Core.” *Language Arts* 92 (4): 256–69.

Cervetti, Gina, Carollyn A. Jaynes, and Elfrieda H. Hiebert. 2009. “Increasing Opportunities to Acquire Knowledge Through Reading.” In *Reading More, Reading Better*, edited by Elfrieda Hiebert, 255–91. New York: Guilford Press.

Costa, Arthur. 2008. “The Thoughtfilled Curriculum.” *Educational Leadership* 65 (5): 20–24.

Harvey, Stephanie, and Harvey Daniels. 2015. *Comprehension and Collaboration*. Portsmouth NH: Heinemann.

Harvey, Stephanie, and Anne Goudvis. 2013. “Comprehension at the Core.” *Reading Teacher* 66 (6): 432–39.

———. 2016. *Content Literacy: Lessons and Texts for Comprehension Across the Curriculum*. Portsmouth, NH: Heinemann.

Harvey, Stephanie, and Anne Goudvis. 2007. *Strategies That Work*. Portland, ME: Stenhouse.

Pearson, P. David. 2006a. Keynote presentation. National Geographic Literacy Conference. Washington DC.

———. 2006b. “Letter to the Editor.” *New York Times*, March 28.

———. 2015. Twitter. @PDAvidPearson. June 13.

President and Fellows of Harvard College. 2007. “Interrogating Texts: Six Reading Habits to Develop in Your First Year at Harvard.” <http://guides.library.harvard.edu/sixreadinghabits>.

White, E. B. (n.d.). Retrieved May 4, 2016, from www.quoteswave.com/picture-quotes/372039.

Wiggins, Grant, and Jay McTighe. 2005. *Understanding by Design*. Expanded 2nd ed. Englewood Cliffs, NJ: Prentice-Hall.

Wilkinson, I. A. G., and E. H. Son. 2011. “A Dialogic Turn in Research on Learning and Teaching to Comprehend.” In *Handbook of Reading Research*, Vol. IV, edited by M. L. Kamil, P. David Pearson, E. B. Moje, and P. P. Afflerbach, 359–87. New York: Routledge.

This article is based on research that informed Stephanie and Anne’s new Content Literacy lesson books (primary and intermediate).



Content Literacy Lessons and Texts for Comprehension across the Curriculum

Written and designed for the updated 2016 second edition of *The Comprehension Toolkit*,

the new *Content Literacy* lesson books provide support for teaching comprehension across the curriculum, including building knowledge and understanding.

Once students have had explicit instruction in six key strategies and begin to use them independently and flexibly, *Content Literacy* engages them in lessons that rely on a repertoire of strategies for understanding.

Building on the original *Toolkit*, the new lessons integrate all comprehension strategies to more closely meet today’s new standards and support content-area learning.

For more information go to ComprehensionToolkit.com.