Connecting Comprehension & Technology
Adapt and Extend Toolkit Practices
“It’s the not the technology that makes the difference – it’s how we use it,” say authors Katie Muhtaris and Kristin Ziemke. These veteran teachers have enhanced learning by integrating digital tools into a series of comprehension strategy lessons. Cemented in their beliefs around student-owned learning, Muhtaris and Ziemke provide models of instruction that support students to think strategically. Explicit lessons accompanied by embedded video links to footage of their respective first- and fourth-grade classrooms show the integration of all kinds of technology—including routine back channel discussion, blogs, book trailers, and teacher-moderated Internet research and synthesis—as well as student self-reflection on using technology. Their classrooms are clearly grounded in pedagogy that encourages students to be curious, build knowledge, collaborate, think critically, and take action in the world. This resource will show experienced and novice teachers how to get connected with other educators, take risks, and cultivate student discovery and expertise.

-Alan November
Senior Partner & Founder, November Learning
About the Authors

Stephanie Harvey has spent her career teaching and learning about reading and writing. An elementary and special education teacher for fifteen years, she now works as a staff developer and educational consultant. The coauthor of the Heinemann titles *Comprehension Going Forward* and *Comprehension & Collaboration* as well author of *Nonfiction Matters* and coauthor of *Strategies That Work*, Steph works with educators, schools and districts to implement progressive literacy practices. Her most recent classroom materials include *The Comprehension Toolkit* and the Primary *Comprehension Toolkit* series. Created along with Anne Goudvis, they form an intensive resource for comprehension instruction and active literacy across the day and throughout the year.

Anne Goudvis has been a classroom teacher, staff developer, and university instructor. She has taught both primary and intermediate grades and for fifteen years was a staff developer with the Denver-based Public Education and Business Coalition. She has a Ph.D. in curriculum and instruction from the University of Illinois, Champaign-Urbana. Anne is coauthor with Stephanie Harvey of *Strategies that Work* and the *Comprehension Toolkit* series. Currently, she works with schools and districts to implement thinking-intensive literacy practices that foster understanding and engagement. Recent interests include integrating reading comprehension instruction across the disciplines, especially in social studies and science.

Katie Muhtaris has enjoyed teaching and learning with her students in the Chicago Public School system for the last eight years. She is Nationally Board Certified as a Middle Childhood Generalist and holds a Master’s Degree in Teacher Leadership. In addition to her devotion to her students, Katie also leads staff development in person around the country and digitally around the globe on Inquiry-based learning, technology integration, and reading comprehension strategies. Katie is the author of the blog *Inquiry Live in the Classroom* where she writes about her day-to-day teaching practices and connects with educators around the world.

Kristin Ziemke has been teaching and learning from children in both urban and suburban schools for the past 13 years. She engages her first grade students in authentic learning experiences where reading, thinking, collaboration, and inquiry are at the heart of the curriculum. An Apple Distinguished Educator, National Board Certified Teacher, and Chicago’s Tech Innovator of the Year, Kristin holds a Master’s Degree in Instructional Leadership. She constantly seeks opportunities to transform education through technology innovation, pairing best practice instruction with digital tools to capture thinking, foster creativity, and increase collaboration in the classroom and beyond.
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When they monitor comprehension, learners keep track of their thinking as they listen, view, or read. They notice what a text—audio or visual, graphic or verbal, printed or digital—says and what they think about that text. They notice when the text makes sense to them and when it doesn’t. They wonder, ask questions, make connections, and make judgments all the time.

Above all, monitoring comprehension is about engagement. It’s about young thinkers staying on track as they explore and respond to ideas in any media, from books, magazines, photographs, and illustrations to videos, read-alouds, websites, and the like.

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To merge their thinking with new ideas, learners notice, think about, and keep track of new information. They activate their background knowledge, experiences, and opinions as they react to, respond to, and question the information. They also revise and rethink misconceptions in light of new evidence to the contrary.

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Questions open the door to learning. As thinkers try to answer their own questions, more questions arise. Some are answered; some are not. Some lead immediately to new information; some linger to be answered another day. It is the quest for answers that feeds learners’ curiosity and spurs them to further inquiry.

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Listeners, viewers, and readers infer to draw conclusions, make interpretations, predict outcomes, surface big ideas, and create mental images—all the while basing their inferences on evidence from the text. Inferring is all about “reading between the lines” whether in a text or on the screen.

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To determine importance, students use organizing tools to work with ideas from printed, digital, audio, or video texts. They distinguish between stated and implied information, between facts supported by evidence in the text and their own reactions, between interesting details and important ideas that support larger concepts. In sorting and sifting ideas, learners take the first step toward another strategy, summarizing and synthesizing, turning new information into acquired knowledge.

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Projects of all kinds provide authentic platforms for learners to apply summarizing and synthesizing strategies. They require students to research, assemble their thoughts, apply thinking strategies, and organize their learning to share with others.

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Introduction

from Steph and Anne

Imagine the most beautiful layer cake you’ve ever seen. Was it tall? Detailed? Did it have different layers of frosting and filling? Perhaps the outside was quite simple, and it wasn’t until you cut a slice that you noticed how intricate and rich it really was. Perhaps the top was decorated with beautiful flowers, fondant, and frosting, but when you saw the inside you realized there wasn’t really much there. Teaching with technology can be like this as well. How many classrooms look technologically brilliant—perhaps a large SMART Board displayed proudly at the center of the room, a publishing center with computer in the corner, a laptop on the teacher’s desk—but when you look at the ways technology is used, the student engagement and teaching depth are not all they could be. To achieve rich learning experiences that reflect the deep thinking we expect of our students, we add many layers to our teaching and our environment, so that our students know that there is something for each one of them inside that cake. The Comprehension Toolkits nurture many layers of literacy: Students read, write, reflect, talk, think, collaborate, and investigate. In this resource, we share how we add more layers to the teaching and learning cake, expanding on and enhancing the great instruction that is already happening. We explore how to make the teaching cake appealing on the outside and rich on the inside through engaging instruction that promotes student learning using a variety of technology tools. Most importantly, we embrace technology as a powerful tool in our repertoire. Technology does not make teaching better; only teachers can do that. However, technology can challenge us to reflect on and enrich our instruction in a variety of meaningful ways.

Connecting Comprehension and Technology is a resource we have created with two Chicago Public Schools teachers, Katie Muhtaris (fifth grade) and Kristin Ziemke (first grade), who have designed active literacy classrooms
where comprehension, interaction, investigation, and collaboration foster a culture of thinking, learning, and understanding. Katie’s and Kristin’s classrooms fairly burst with joyful, enthusiastic, learning. Reading, writing, drawing, talking, listening, and investigating are the cornerstones of this brand of active literacy. And the thoughtful, creative use of technology is not just the icing on the cake! It is part of the fabric of daily teaching and learning. In active tech/lit classrooms like theirs, kids are constantly engaged. They spread throughout the room, some viewing a video on an iPad, others blogging with scientists at NASA, some sharing their responses on Edmodo, and still others reading books of all kinds.

In 2013, we educators hear incessantly about the need to prepare our kids for life in the twenty-first century, to teach in a way that allows them to participate fully in a challenging, global, and perhaps unfamiliar world. We are expected to make every child “career and college ready.” Tall order! What exactly does that look like? What happens on a daily basis in the classroom? What must we teachers do? Education is always rife with buzzwords: outcome-based education in the 1980s, scientifically based research in the 2000s, and twenty-first-century skills and career and college readiness in 2013. Who would argue with creating a curriculum that supports kids to be both career- and college-ready in the twenty-first century? April 2010 marked the twenty-fifth anniversary of the Internet. Hard to believe that during our early years as teachers, online research was not even a concept—let alone an option. Facebook only erupted onto the scene in 2004. Google didn’t exist in the early 1990s—and now it’s a verb. Phones were stationary, for goodness sake. The reality is that the careers of the future are as much a mystery to us now as Google, Facebook, and iPhones were a dozen years ago! But although we may not know what our kids will be doing when they leave school in 2013 and beyond, we know kids and we know teaching and learning. Some things never change.

In late 2009, on his CNN Sunday morning news show, “GPS,” Fareed Zakaria asked Google CEO Eric Schmidt what he thought education should look like going forward. Schmidt answered succinctly, “Teaching will be learning how to ask the right questions. I was taught to memorize. Why remember it? Now you just need to learn how to search for it. Instantaneous access really changes your life. What never changes is the need for curiosity. What you really need to do is teach people to be curious.”

Curiosity and thoughtfulness are at the center of engaged teaching and learning. Passion and wonder are contagious. No two dispositions will better prepare our kids for what lies ahead. It is our job as teachers to unleash every ounce of passion and wonder we can muster so our kids catch the curiosity bug. Teaching kids to think strategically and ask questions ranks at the top of our list of responsibilities in the twenty-first century. That’s what career and college readiness looks like to us.
from Katie and Kristin

Many teachers are hesitant to embark on the journey toward technology enrichment. We know, Kristin was one of them! As teachers, we often associate practices with our limited experiences or preconceived beliefs about education. But we also know we must constantly mold and adapt our practices to the changing needs of our students and the world around us. Like our students, we must keep learning. The need to extend our knowledge and instruction to digital tools is inescapable in today’s world.

When we educate ourselves about technology, we know we have to look through a lens of best practice. What do we know about teaching and learning that guides us to these instructional decisions? Just as we find and create models for our students, we need to seek out experts and models for our own practice—in books, through blogs, on websites, in Twitter feeds, and via other social media. We go through an observation phase and observe others using a tool or attempting a practice. And we then “have a go” and try out a piece in the classroom, observing our students’ interaction, motivation, new learning, and skill development, and we reflect on how this changes and enhances classroom practice.

When used properly and with purpose, technology can add meaningful layers to our instruction. It is not our intent to replace existing practices but to enhance them so that we maximize student learning. Our digital layers can include expanding the audience for student work into an authentic medium, giving students the ability to build on and learn from one another’s thinking or providing the teacher with an additional assessment piece.

Technology can and should change the game, enrich or challenge the learning; if it doesn’t, there is no point in adding it to the mix. Too often, the technology in a classroom is used only in the most basic way possible: as an expensive replacement for paper and pencil, for tedious unsupervised practice, or for adaptive test preparation, for example. These uses of technology are not enriching or challenging for students. If we can accomplish something just as easily with paper and pencil, then we need to question whether this lesson, activity, or experience is where the technology should be used. As reflective educators we need to ask constantly, “How is this technology enabling students or teachers to do something they would not have been able to do otherwise?”

Technology is a natural vehicle for The Comprehension Toolkit’s active literacy practices; conversely, Toolkit is a convenient vehicle for introducing meaningful uses of technology into the classroom. Technology tools are a natural support for Toolkit’s active literacy focus on students interacting with text and with one another to make meaning. Students still engage in annotating text, leaving tracks of their thinking, and turning and talking. Now, they also work online: having real-time discussions, collaborating on documents.
as a class and in small groups, building on one another’s thoughts and ideas, and responding thoughtfully to classmates’ thinking. Conversely, Toolkit instruction opens the door for rich and thoughtful classroom applications of technology. When we begin our technology journey by grounding it in time-tested strategy instruction, we ensure that our use of technology is meaningful and authentic. We help students see the natural links between the strategies they use in print text and the strategies they use when navigating the Internet. Offering students many opportunities to practice these strategies in new contexts helps them learn to transfer and apply their learning across subjects and in new and creative ways.

**Lessons for Connecting Comprehension and Technology**

As we’ve mentioned, it’s essential to ground your technology use in authentic and essential skills that students need. This is why we’ve connected our lessons to those presented in *The Primary Comprehension Toolkit* and *The Comprehension Toolkit* for grades 3–6. Toolkit lessons offer a practical way to begin enriching comprehension instruction with technology. The lessons in *Connecting Comprehension and Technology* use Toolkit lessons as springboards for expanding into technology based on current practices that you may already be using in your classroom. (If not, that’s okay too! Perhaps you’re exploring both at the same time or you’re looking to ground your existing technology use in reading strategies and active literacy practices.)

*Connecting Comprehension and Technology* provides two primary and two intermediate model lessons for each Toolkit strategy, using digital tools to apply the strategy to new content. The primary models, taught in Kristin’s first-grade classroom, relate directly to specific lessons in *The Primary Comprehension Toolkit*. Kristin chose one Toolkit lesson and created two technology-based lessons around it: one that adapts and reteaches the Toolkit lesson, this time using digital tools; and one that extends the Toolkit lesson, applying the strategy with technological resources. The intermediate models from Katie’s fifth-grade class are spin-offs from corresponding lessons in *The Comprehension Toolkit*. Again, Katie chose one lesson for each strategy to use as a springboard to her digital environment. The first of her intermediate lessons reteaches the corresponding Toolkit lesson, adapting the lesson using technology. The second extends the learning, applying the strategy to new and sophisticated tasks.

The goal of these lessons is to model the use of technology in the service of enhancing comprehension. The lessons use Toolkit strategy development as a foundation, adapting and extending instruction with digital tools. They were
written in explicit detail to allow you to see how accomplished teachers blend essential comprehension strategies with thoughtful technology use. View them as a starting point for your own practice and as an inspiration for you to go forward planning and implementing your own lessons. As always, start with your students and what you can access, and then work from there. Once you begin to think about what you can do, a world of possibility is opened up. Let technology feed your creativity in planning meaningful instruction that is grounded in good practice and reflective teaching. Think of these lessons as your first steps into a world of exciting, creative, and worthwhile technology use in your classroom.
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P = primary lesson    I = intermediate lesson
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READ WITH A QUESTION IN MIND

Share Questions Online

Curiosity comes naturally to young children. As the foundational lessons in *The Primary Comprehension Toolkit* establish, an engaging text that spurs student interest inspires young learners to wonder about the text and ask questions. In this lesson, which can be used in conjunction with *Toolkit* Lesson 11 or replace it, students use a digital platform, Edmodo, to document their wonderings. Previously, kids have tracked their learning and wonderings on sticky notes and Thinksheets. Now, using their iPads, they track their questions on Edmodo, a safe social networking site. They see and hear new questions that they may not have thought about. They interact with the text and one another to ask and answer questions that have been posted to the site.

In addition to stimulating curiosity and helping kids develop the habit of questioning, the Edmodo backchannel platform provides an informal way for students to share information within a limited group. Instead of working in isolation, kids can see, learn from, and be prompted by ideas from the whole class.

**Resources & Materials**

**Lesson Text**
*Tornadoes* by Brian Cassie

**Classroom Supplies**
- projector
- classroom Edmodo account
- Apple TV or classroom computer
- *Questioning* Anchor Chart
- chart paper

**Student Supplies**
- iPad
- Edmodo account

**Snapshot**

Students sit on the rug with their iPads on their laps. They interact with the iPad, the text, their teacher and one another during the interactive read-aloud of a book about tornadoes. During a turn-and-talk Tatum leans over to talk to Col.

Tatum: What are you wondering about, Col?

Col: *He holds up his iPad to show her his latest post.* I want to know, “How much air does it need?” It says tornadoes need air to form, but exactly how much? What are you wondering?

Tatum: *She scrolls up on her iPad to locate and review her most recent post.* I wondered, “How big is a tornado?”

Col: Oh, yeah! I see you posted that right here. *Col points to Tatum’s post on the Edmodo discussion.* That’s a good question, Tatum. I don’t know. Maybe Ms. Ziemke will read something about that. *He scrolls through the backchannel, reviewing the wonderings other students posted.* It looks like lots of people are asking good questions.

Tatum: Yeah. I just can’t stop wondering. And this backchannel is so much fun!
Connect and Engage

[Students come to the rug and place their iPads next to them. I sit at the front of the meeting area with my iPad and the book Tornadoes by Brian Cassie. The projector is on, hooked up to our classroom computer and ready to project the Edmodo site. Kids have their eyes on me and are ready to begin the minilesson.]

Hello there, learners! It’s great to see everyone on the rug, ready to go with their thinking and learning actions. I am very excited to talk about extreme weather today! We’ve been learning a lot about weather this year. Do you remember when we studied Hurricane Irene at the beginning of the school year? What other weather events have we studied? Turn and talk with your think partner.

[Students turn and talk on the rug. I listen in to several conversations close to the front of the rug so I can share some of the ideas I hear students discuss. I bring the group back together.]

Lots of good remembering going on! I heard you talk about blizzards, thunderstorms, and the book Recess at 20 Below. Well, today we’re going to talk about tornadoes! I’m sure you have a lot to say about tornadoes, but before you do that I want to show you this quick video clip of a tornado in action. Please turn your eyes and your bodies to the screen.

[Kids shift so they can see the screen. Once they have viewed and heard the clip about tornadoes, they all have something to say about the topic and are ready to engage deeply in the learning.]

Wow! Turn and talk with your think partner. What did you notice?

[Kids turn and talk excitedly, sharing their observations. A few kids share out.]

Lots of good noticing! Did anyone have a question about tornadoes?

Max: What was all that smoke around the bottom of the tornado?

Avery: Where do they happen?

Good questions! You know what? I’m curious to find out more about tornadoes too. Let’s see what we can discover.

Model

Remember, you’ve practiced listening to the voice in your head as we read. You know that lots of times when we read, we get new information. You also know that sometimes a question pops into your head when you read. That happens because we are curious! Kids and adults wonder about information and ask questions to learn more. Today, we’re going to listen carefully for those questions and jot them down when we hear our inner voice ask things like, “Where are they? How is that possible?”
I'm going to show you how we can use Edmodo as a place to store and share our questions. Watch me, and then I'll invite you to join in a little bit, OK?

First, I'm going to log in to Edmodo. [I type in my username and password. I hold up my iPad for all to see and project it on the screen. I tap Login and enter the site.] OK, so here's what it looks like on my teacher page. If you look right at the top, you can see I've added a new post to our “106 Kids” page.

Let me read it and see what it says: “From Ms. Ziemke: Today we will read about tornadoes! Please jot your questions below. We will continue to research to find the answers to our questions. Happy reading!”

Cool! So now I'm going to jot my questions in the Reply box as I hear them in my head. I'll start reading this book, Tornadoes, and any time I have a question, I'll type it in. Let's read about tornadoes, and you observe what I do.

[I start reading Tornadoes. At the bottom of the first page, I stop.]

This page told me about tornadoes and twisters. But as I read it, I heard that voice in my head zoom in on the part that said, “These storms do not happen often,” and wondered how often tornadoes happen. [I model for students on my iPad.] I'll just tap inside the Reply box and type, “How often do they happen?” [The kids watch my response appear on the screen.] And I'm also going to add a bit of my thinking. I want to know, “Do they happen once a month? Do they happen more than that?” I'll type that, too. [I add “Once a month? More?” to my reply.]

Now that I've wondered about the new information, I'm going to tap Reply and post it to our Edmodo discussion on tornadoes. Watch and see what happens. [I tap Reply, and my question is posted under our discussion.] Can you see my question posted right there?

OK, so now I'm going to keep reading. As I read I'm going to listen to that voice in my head. When I hear a new question, I'll stop and add that to our Edmodo backchannel.
A tornado is a spinning storm with very, very strong winds. The winds spin in a circle. At the bottom of the page, I stop to think aloud. “Oh! I’ve got another question. Let me go back on Edmodo. I’m going to tap in the Reply field, and type my question, ‘How fast do they spin?’”


![Me - How fast do they spin?](Jun 11, 2012)

Ms. Ziemke’s new wonderings

Give a thumb-up if you were wondering the same thing. [Students place a thumb-up on their knee to signal they had the same question.]

Guide

Turn and talk. What did you notice me doing as I read and posted my questions about tornadoes?

Kids turn and talk, and then a few share out.

Nola: You typed your question in the Reply box and posted it to Edmodo.

Josie: When you were reading, you stopped to think about the information.

Col: You looked at the book, listened to the voice in your head, and then typed your thinking.

Terrific noticing! I am very curious to keep reading and learn more about tornadoes. I’m sure you’re excited to learn more too! Please take out your iPads and log in to Edmodo so you can join the backchannel conversation.

Students move the iPads from the rug to their laps. They wake their iPads up and locate the Edmodo app. Each student has previously received a login and user name. Students have an easy-to-remember login, such as their name and graduation date. I’ve created a password card for each child as a scaffolded support for students who need help remembering their information. Two students quietly get up and leave the rug to locate their login information. At their tables, they type in their information and return to the rug without disruption.

Once you’ve logged in, please reply to the post and greet your friends so we can see who has joined the backchannel.

OK, friends. Now listen and view while I read this book. At the end of each page, I’m going to stop and give you time to think and wonder about tornadoes. I want you to listen carefully to that voice in your head. When you hear a question in your mind, type it on Edmodo. Remember to look at the questioning chart, which has some of the question language we use.
I provide time for kids to type their questions into the backchannel. As responses pop up, I read them aloud. Students are able to view their peers’ questions on their devices as well as on the classroom projector.

Aimee posted a good question: “Can 2 tornadoes form at one time?” Oh, look! Ariel had the same question! [I read Ariel’s post.] And Caoimhe! Look at how several kids wondered the same thing!

Edmodo question posts

Adam asks another good question: “How tall are they?” Great wondering, friends! Let’s keep reading and see what else we can discover.

[I continue to read the text, stopping at the end of each page for students to post their questions. I read aloud many of the posts so students can hear and view their peers’ posts.]
If you don’t have a question right now, go back and look at the posts your friends made. Do you notice someone who had a question that you also wonder about? If so, maybe you can collaborate later and see if you can find the answer to your question. Do you see a post that is a really good question? Maybe it’s something you didn’t think about. Does someone else’s post cause you to wonder about that, too?

[As I read and pause after each page, students continue to wonder and add their questions by posting to Edmodo. During the reading, a few questions are answered, such as Jacob’s question, “Is tornado alley real?” He adds a post to show he found the answer to his question.]

Collaborate or Practice Independently

[I finish reading and turn to the class.]

What an informative book! I learned a lot, but I am also wondering so much more about tornadoes right now! What are you wondering after reading this book? Turn and talk with your think partner.

[Kids turn and share their wonderings and posts with their think partners. During this time I travel around the room and listen in to their conversations. I stop and check in with Tess and Jacob.]

Jacob: Ms. Ziemke! Tess and I have lots of the same questions!

Really? Like what?

Tess: [She reaches over and scrolls up and down on Jacob’s iPad to show me the questions they have in common.] Like about when they occur. We both want to know if they always happen in the afternoon.

And were you guys able to find the answer to that wondering?

Jacob: No, the book doesn’t tell you. But we’ve got to figure it out cause we really want to know!

[After a few minutes, I call the group back together. I hold up my iPad and scroll through the backchannel so students can view the number of questions they posted.]
Share the Learning

Friends, I am impressed with all the wondering! Look at all these amazing questions! Nice work. I can tell that many of you listened carefully to the information I read. You stopped and thought about the information and listened to your inner voice and backchanneled your questions. Some of you got your questions answered.

Jacob: I did! I thought that tornado alley was a pretend place. But then the book said it was a real place, and it is in Texas and Iowa.

I’m so happy to hear you found the answer to your question! Did anyone have a question that was not answered by the book? [Many students signal wondering with a three-fingered W.] Wow! Almost everyone has an unanswered question. Sometimes we get our questions answered just by reading, and other times we finish the book and still have a lot of questions. We call those questions lingering questions. Lingering questions are questions we still have even when the book is finished. Tess and Jacob had a lingering question. They both wanted to know if tornadoes always happen in the afternoon.

Tess: Yes! I’m dying to know! I want to know so I can be prepared in case we ever have a tornado in Chicago.

Let’s do this. When I say, ‘Go,’ take a few minutes and write down one lingering question on a Post-it note. You can copy your unanswered questions from our backchannel discussion or come up with a new one. When you’re done, we’ll collect our lingering questions here. [I pull out a new piece of chart paper and write “Lingering Questions” at the top of the page. I point to it for all to see. Students jot their questions and post them on the chart.]

NOTE
This collection of lingering questions becomes the basis for an eBook I create for the next lesson to provide students with opportunities to read with a question in mind. Matching the information in the eBook to some of students’ lingering questions gives young readers a chance to research successfully and actually find their answers.
Reflect and Assess

At the end of the day I review both the digital and paper posts students created during the lesson. One advantage of using a digital platform as a backchannel is that all student responses are aggregated on the Edmodo website. Previously, when I did this type of silent dialogue, I’d have five large pieces of chart paper filled with student writing to carry home at the end of the day and sort through. Now, I can log on to Edmodo from any computer or device and see the conversation as it unfolded in our classroom. As a result, I can also revisit our backchannel in the future and don’t have to worry about storing paper copies of student work; their ideas are all available to me via the website whenever I want them.

I assess student thinking by carefully studying their posts. I want to see every child demonstrate curiosity and think and wonder about the text. When reviewing their posts, I look to see if their questions connect to the text. I’m also looking to see if they answered any of their questions along the way as Jacob did when he posted, “There’s such a thing as Tornado Alley.” Some of their questions lead to other questions, and I notice that as well. Finally, I look for evidence of students who take their questions beyond the book and make connections to other learning or subject areas.

When I view the posts Jacob created throughout the lesson, I can see that he wonders and asks questions as he listens to the read-aloud. Along the way, he inserts his thinking and reactions to the text: “Under ground fort cool.” This shows me that his thinking connects directly to the text and that he listens to the voice in his head as he reads. He also pays attention to his new learning as he posts the fact “The United States has the most tornadoes.” Jacob’s frequent posts show that he has a good grasp of the technology and that he understands the purpose of Edmodo to wonder, learn, and share his thinking with others.
Matthew’s beyond-the-book question “Are tornadoes cousins with sandstorms?” shows me that he is making connections across subject areas and trying to merge new information with what he already knows as he establishes a relationship between tornadoes and sandstorms.

Matthew became obsessed with the idea and revisited the question many times throughout the day. When he returned from art class and said, “Ms. Ziemke, I just can’t stop thinking about sandstorms and tornadoes. I think they really are the same,” I decided to let him do a quick mini-inquiry to find out more. As I helped him do an online search, we both learned that they are similar in how their winds pick up dust and debris.

From Wiki.answers.com:

Where the two are similar is that both generate huge fast-moving clouds of dust picked up from the surface. In a tornado, this is localized to the debris field. In a sandstorm, the sand and dust may take longer to disperse.

To document his new learning, Matthew created the diagram shown here. He synthesized his understanding as he drew and labeled characteristics of a tornado, labeling the funnel and debris. Matthew used Edmodo to ask a question, continued to think about that question, and researched to find the answer. His drawing and labeling of the funnel and debris demonstrate that he is able to use a variety of technology tools to share his learning.
Adapt and Differentiate

If you don’t use Edmodo, there are several other sites you can use for backchannel discussions—for example, TodaysMeet, Chatzy, and Twitter. With TodaysMeet, a teacher with an email account can create a chat and then provide the link to students. Students do not need an account to access the site, only the link to the chat room.

Another alternative would be to use an online discussion board like Padlet. Padlet allows you to create a room, and then with the link, students can post sticky notes to share their thinking.

There are several great resources for finding short video clips to build background knowledge and help students connect and engage with the lesson. Safari Montage is a subscription-based video library for schools. It has many movies and clips from Schlessinger Media and BBC that connect to content area studies. BrainPOP is another terrific resource that provides short podcasts on a wide range of topics, including math, science, reading, and blogging. Discovery Education and YouTube are also good sources.
Share Questions Online

**TEACHING MOVES**  
- Show a video clip and ask students to share observations and questions.
  - Wow! Turn and talk with your think partner. What did you notice? Lots of good noticing!
  - Did anyone have a question?

- Model how to post questions on a backchannel platform as they listen to a read-aloud.
  - First, I’m going to log in to Edmodo.
  - So now I’m going to jot my questions in the Reply box as I hear them in my head. I’ll start reading this book, ______, and any time I have a question, I’ll type it in.

- Engage students in listening and responding.
  - OK, friends. Now listen and view while I read this book. At the end of each page, I’m going to stop and give you time to think and wonder. I want you to listen carefully to that voice in your head. When you hear a question in your mind, type it on Edmodo.

- Share lingering questions.
  - What an informative book! I learned a lot, but I am also wondering so much more about ______ right now! What are you wondering after reading this book? Turn and talk with your think partner.

  - Almost everyone has an unanswered question. Sometimes we get our questions answered just by reading, and other times we finish the book and still have a lot of questions. We call those questions **lingering questions**. Lingering questions are questions we still have even when the book is finished.
Follow Up

- The lingering questions students posted are the focus of the following extension lesson. We continue to focus on asking questions, reading, and researching to answer them. Using their lingering questions as a focus, I create a short eBook that tells more about tornadoes and addresses some of their questions. Students go back to their questions and then try to find the answers, reading with their questions in mind. The eBook acts as a scaffold to support readers to find answers to their questions right in the text.

- Another way we use Edmodo is to practice paraphrasing information. During a read-aloud kids jot the big ideas in their own words. For younger learners, I’ve found it easier to teach this concept when they listen to a text. When introducing paraphrasing through a read-aloud, kids don’t have visual access to the printed text and therefore do not feel compelled to write exactly what the author says.

- Edmodo can also be used as a place to archive all that happens in our classroom. Throughout the school year students use it to post book recommendations and talk about what they are reading, document the local weather, post and respond to math questions, and otherwise document and share their learning.

- The Edmodo teacher page has a polling function that allows you to survey students and ask for feedback, and the results are compiled in a graph for students to see. I use this to represent mathematical concepts when we collect data and represent it visually.
Adapting The Comprehension Toolkit, Lesson 9  
ASK QUESTIONS TO EXPAND THINKING  

Ask Questions in Online Discussions

This lesson is designed to follow the three Ask Questions lessons in *The Comprehension Toolkit*, when students are comfortable with focusing on questioning. Here, we engage our readers with a picture book read-aloud of *Mercedes and the Chocolate Pilot*, a story that takes place just after World War II during the Berlin Airlift. Set in a historic period students may not know much about, the book provides ample opportunities for students to think deeply and practice questioning.

In this lesson, students use the social media site Edmodo to capture their initial thinking and questions in a read-talk-type format. Students reflect on their classmates’ comments online and also have a face-to-face discussion about the most interesting or compelling ideas from the class. Combining oral and written discussion allows all students access and gives them varied response options. Because the online discussion allows them to see what all of their classmates think, they are exposed to a wide range of thoughts, not just the ideas of those around them.

### Resources & Materials

**Lesson Text**  
*Mercedes and the Chocolate Pilot* by Margot Theis Raven

**Classroom Supplies**  
Predetermined discussion groups  
Edmodo app or Internet browser  
chart titled *Lingering Questions*  
Padlet app (optional)

**Student Supplies**  
iPads  
Edmodo app or Internet browser  
Post-its

### Snapshot

Students are quietly typing, but they aren’t engaged in individual work. They are leaving tracks of their thinking in a backchannel discussion on Edmodo, responding to one another’s comments as they go. Today students are in three different online discussion groups. These smaller groups give them a manageable number of classmates to respond to while still giving them the benefit of having access to a wide variety of thoughts and ideas.

I pause every few pages during the read-aloud, much as I would if students were jotting on Post-its. This gives students time to reflect on their questions and thinking about the text and then share those with the class through Edmodo, wrestling with questions and confusions as well as considering big idea questions that they might not have thought of on their own.

**Brynn:** I wrote “1948? uh-oh” because I know that was around World War II and so I’m thinking this book will be about that.

**Anna:** Oh, I see. I didn’t know that. I wasn’t sure if it was a war or not. But I’m confused about why there is *Chocolate* in the title. What does chocolate have to do with wars?

**Brynn:** That’s a good question. Maybe I can post that in my group, too.
**Connect and Engage**

[Students sit gathered on the carpet, devices in hand.]

Boys and girls, I’ll know you’re ready when I see that your screen is face down and you’re looking at me. Thank you! Do you remember when we talked about asking questions last week? What did we learn?

Jake: We used our reading brains to ask questions about the text.

Lucas: We noticed when our questions were answered in the text and used a lot of strategies to help ourselves answer questions.

Right! Anytime we are being active readers, we are using the Ask Questions strategy. One of the things that helped us was to write and talk about our thinking. Today we are going to build on that strategy a little, but this time we are going to use our class social network, **Edmodo**.

Sometimes when I am reading a book or an article, I like to discuss it with people online. It helps me to understand parts of it that I wouldn’t otherwise understand, and it gives me other people’s opinions and perspectives.

**Model**

I have this fabulous book called *Mercedes and the Chocolate Pilot* that I’m going to read to you. Before I begin, I’d like you to log in to Edmodo on your mobile devices and find your discussion group. It will be located on the left-hand side where you see your other small groups. I’ve split the class into three groups today so you don’t have to keep up with so many comments.

[The students flip their devices over and begin to log in. This is something they have done many times before, and they make sure to help their neighbors before signaling to me that they are ready to move on.]

This is a great book that I just know you’ll love! Since you may not have a lot of background knowledge for this topic, some things in it might be confusing to you. We’re going to use our Edmodo discussions to help us make sense of what we are reading. When we lack background knowledge, we often have a lot of questions. On Edmodo, you can share your questions, your thinking, or your background knowledge or inferences with your discussion group. And you can see other people’s thinking and find some new ideas—maybe even get some questions answered.

[Begin by showing students the cover photo, which shows a World War II bomber flying over the Berlin of the 1940s, and modeling my thinking before I even begin to read.]

Just looking at this cover, I already have so many questions! One thing that I’m wondering is, “Where is this taking place?” It seems like it might be a historical fiction story, and I know that setting is really important in historical
fiction. I think I’ll need to know where it takes place to understand what is happening. I’m going to type my question to my group. “Where is this taking place? I think that will be important!” Do you see how I didn’t try to type everything I was thinking? I’m just writing the most important part in such a way that other people can get the gist of my questions. Turn and talk. What are you thinking and wondering already?

Guide

[As kids talk to one another, I listen in to the groups closest to me.]

Charlie: I had the same question about where, and I am also wondering when it takes place.

Nolan: Yeah, because if we knew when, then maybe it would give us some—some idea about what was going on, and then we could use any background knowledge we have.

Charlie: You can sort of infer it’s like a war time or something because those buildings look really broken down. But, not a really long-ago war like the Revolution. Closer in time.

Do you mean these buildings on the cover?

Charlie: Yeah, like they look like they were bombed or something. But what is really confusing me is: If this is a book about war, why does it mention chocolate?

These are very thoughtful ideas. Why don’t you go ahead and summarize them for your discussion group on Edmodo? Remember to make your comment short, but get the most important ideas in.

Collaborate or Practice Independently

Readers, go ahead and jot your thinking to your Edmodo discussion group. Don’t forget to ask questions if you have any, because your discussion group is right there to respond to you!

[As students work, I monitor what they are writing from my own device. In this way I can see what everyone is thinking and highlight important ideas or address misconceptions. When most students seem to be wrapping up, I begin reading.]

I’m going to start reading, and as I do, I’ll pause every few pages so that you have time to share your thinking with your Edmodo group. I’ll make sure to stop long enough so we have time to get our thinking down.

One late August day, Mercedes slipped her hand under the white chickens she kept in the small courtyard garden behind her apartment building. Please let there be eggs, she wished as the silver-winged planes flew above like guardian angels. But like yesterday and the day before, the chickens’ nests were empty, except for one small egg.
Readers, go ahead and jot down any questions you have about this story so far for your discussion group. [I pause to let students type, and I read their comments as they do. Several students wonder why the chickens won't lay eggs or why it is so important that they do. Others ask questions about the planes: Who are they and why are they described as guardian angels? After a few minutes, I continue to read.]

Mercedes fed each chicken a worm and tried not to cry. She loved her four feathered pets, but Mama would not be happy. Eggs were more precious than gold in West Berlin during the Russian blockade.

Readers, I can tell that several of you have a question, so go ahead and type them to your group. [Because students lack background knowledge on the Russian blockade, many of them have a burning question they want to type. I honor this and pause so that they don’t miss part of the story. Then I continue to read the story, stopping to allow students to leave comments for their discussion groups and turn and talk.]

[After I have completed the book, I ask the students to have a face-to-face discussion with their groups.]

Now, get together with your Edmodo discussion group and talk about your thinking. Use this conversation to clarify, expand on, and explore the ideas that came up in your Edmodo posts and your turn-and-talks. [As they do this, I listen in.]

Maddie: It seems like we had a lot of the same questions. But we were able to help each other because we picked up different parts of the story.

Aidan: Yeah, like at first I thought the little girl was the pilot, but then you guys clarified that for me. You answered my question.

Destiny: I thought it was nice that people were polite.

Maddie: I was confused about why they didn’t have any eggs. I mean, why couldn’t they just go to the store? But then I was thinking it might be a famine.

Merlin: I had that same question, Maddy. I was also wondering why the book ended so mysteriously. Why did they say his story wasn’t over?
[The other students agree.]
Destiny: Yeah, I have a lot of questions still. Was this during a war? And why did they have to bring food on the planes?
Aidan: And why didn't he just come to her house?

So it sounds like you all still have some lingering questions from this story.
Maddie: Yes, we have a lot of questions still.

I think we need to have a little time for you to explore these lingering questions!

Share the Learning
[I gather the students back on the carpet to wrap things up and reflect on the comments left.]

Wow! What an amazing book! Let's take a few minutes and go back and review the thoughtful thinking that we've done. How did your online discussions go today? When I talked with this group, they said that they were able to help each other answer some questions, but that they found they had a lot of lingering questions.

Maria: It helped me to see what my group was thinking because there were some things in the story I didn’t understand.

That’s great, what else?
Merlin: It was really helpful that you stopped and gave us time to get our thoughts down.

Yes, there is a lot in this book, so when I paused to give you time to think it was helpful? Good.

Charlie: It was also really good that we got together because there were some things that people typed that we wanted to talk more about, and it was easier to do that face-to-face.

So it seems like a good balance of talking and typing works best for everyone? [The students nod.]

Gabi: Yeah, because some people in our group really liked the online part and others really liked the face-to-face part, so it kind of made everyone involved.

As I looked over your discussions it seemed like you still have a lot of lingering questions. Sometimes when we read books, especially historical books or books about other cultures, we don’t have a lot of background knowledge but we do have a lot of questions. Turn and talk to your neighbor about the lingering questions that you have.

[Students turn and talk excitedly.]
You know, I’d love to get these questions down. Why don’t you grab some Post-its, write your lingering questions on them, and then place them on this chart.

**Reflect and Assess**

When I look at the discussion from this lesson, I’m looking for evidence that students are actively engaged in the text and with one another, that they respond to and build on one another’s ideas when given time, and that their comments show understanding and can be read by others. As with any online interaction, I’m also looking to see that students are practicing polite and respectful exchanges. Let’s look at Maddie’s comments over time.

---

**Maddie**

Could this have something to do with a war?

@Brynn Why do you say uh-oh about the year? Do you know something about that year?

I do think this is war time because of the bombed buildings and the planes flying overhead. But is the war still going on or is it just after?

@Kiara I agree. I’m also wondering why they can’t get a lot of food. Why is this family so dependent on the chickens?

The illustrations in this book are so pretty. I wonder if there are any other books by this author?

@Isak What makes you think that? (In response to “I wonder if this family is part of the holocaust.”)

I like that line … the chocolate found her. I wonder how the author came up with that?

Is that the end?? I have so many unanswered questions!

---

When we look at Maddie’s comments to her group over time, we can see the evolution of her thinking. She asks questions about the text, notices when they are answered, and gives evidence of how she answered them. It’s also clear that she is taking in her classmates’ background knowledge and synthesizing it with the text to answer questions. Her last comment shows that she is brimming with lingering questions about this text! As a participant in the conversation, she uses classroom conventions of directing her comment to specific students and asking follow-up questions to help them clarify their thinking.
For comparison, let’s look at Kiet’s comments over time.

Kiet

What is the berlin air lift and how did candy fall frome the sky?

I think there was a war maybe.

What’s the russian block and why is there no one there and is this like war would two and is there only chickens for food?

Why did air planes have to breing the food to Berlin?

So he makes the candy or gets it from a store and what trouble did he get in?

Wha is a bombed out house and how dose the chocolat man get the letters?

Kiet’s contributions show that he is using questioning as a way to help himself understand what is happening in the story. As a teacher one thing that I want to determine about his strategy use is whether or not he is acknowledging when his questions are answered in the text. Kiet would have benefited from seeing some of the thinking that his classmates did, but when I look at Kiet’s comments I notice he has not responded to his classmates’ comments and thoughts. Giving Kiet some time to go back and review the conversation and reflect on his classmates’ thinking would provide an opportunity for him to consider their questions as well as address any misconceptions he might have. I would use these comments over time as a starting point for my next conference with Kiet to determine how I can help him refine his use of questioning as an effective strategy to aid his comprehension.
### Ask Questions in Online Discussions

<table>
<thead>
<tr>
<th>TEACHING MOVES</th>
<th>TEACHING LANGUAGE</th>
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| Begin an online book discussion by responding to the book cover. | - Just looking at this cover, I already have so many questions! One thing that I’m wondering is ______.  
- I think I’ll need to know this to understand what is happening. I’m going to type my question to my group. |
| Invite student participation in a backchannel discussion. | - These are very thoughtful ideas. Why don’t you go ahead and summarize them for your discussion group on Edmodo? Remember to make your comment short, but get the most important ideas in.  
- Readers, go ahead and jot your thinking to your Edmodo dialogue group. Don’t forget to ask questions if you have any, because your dialogue group is right there to respond to you! |
| Identify lingering questions. | - So it sounds like you all still have some lingering questions from this story.  
- You know, I’d love to get these questions down. Why don’t you grab some Post-its, write your lingering questions on them, and then place them on this chart. |
| Debrief the lesson. | - Wow! What an amazing book! Let’s take a few minutes and go back and review the thoughtful thinking that we’ve done. How did your online discussions go today? |
Follow Up

- Students can use Edmodo conversations with varied types of text to build knowledge and understanding collaboratively. They might have a backchannel discussion during a read-aloud as they did in this lesson or have a discussion in smaller groups around differentiated texts. You can prompt students to focus on a certain strategy, question, or topic or allow them to take the discussion in a direction that seems natural to them.

- Edmodo can also be used for longer responses like the summary response featured in Lesson 26, “Read, Write, and Reflect,” in The Comprehension Toolkit. You can either post the question and have students respond, or each student can start her or his own post so that other students can reply directly underneath. This works well if you have a limited number of devices and students need to use the technology at a station or center.

- For an additional technology enhancement, use an online corkboard like Padlet instead of Post-its on a chart for the share-out in this lesson. The image below shows what a share from this lesson might look like.

![Padlet share-out](image)

- With Padlet, it's easy to organize and categorize students' questions so they become visible to the entire class. It's also easy to retrieve a "wall" later, a benefit for those of us who aren't good at keeping track of charts or don't have a lot of wall space. You can literally see every wall you've ever done, so you can compare student thinking across time, revisit walls of books with common themes, have students reflect on their growth, and so on.
Online discussions are an important part of our adult world. While this one is within the class, our students will participate in a variety of online media for learning as their education career continues. It’s important to help them identify guidelines for online discussions that apply to both the classroom and the world around them. These are some examples of rules for digital discussions that some students came up with.

Students’ guidelines for online discussions

- Don’t write abbreviation, example: t.w.i.t = to wish information!
- Be nice, don’t cyber bully. Be nice, appropriate and positive in your social conversations.
- Don’t cyber bully, use nice words, be friendly.
- Stay on subject (don’t get side tracked) and do what you are supposed to be doing.
- Don’t give out personal information like passwords, your address, your name, etc.
- Check your work, people won’t understand what you are saying. Don’t say mean things about peers.
Appendix

Terms and Tools
The following is a list of terms and tools—websites, apps, and programs—mentioned in this book. Names and descriptions were accurate at publication, but as with all digital elements, some may change over time. A Web search will usually discover valuable alternatives.

**Animal Planet.** A website containing photos, videos, and other forms of information about animals—wild animals and pets. [Lesson 2]

**Apple TV.** A media hub for sharing in classrooms with iPads. Using AirPlay, Apple TV can mirror the screen of an iPad on an HDTV or projector. [Lessons 5 and 9]

**Application, app.** Computer software that performs a specific task on a computer or other digital device.

**Audio recording.** There are various apps that you can use to record read-alouds, book reviews, and other teacher and student audio. For audio projects we like Recorder HD. For short snapshots (30 seconds or less), try Croak.it, a free app and Web-based recording tool. See also Recorder HD. [Lesson 10]

**Bookmarking sites.** Websites like Diigo and LiveBinders collect and organize research materials so students can access them without doing an open Web search. [Lesson 2] See also KeepVid, Flickr.

**BrainPOP.** A collection of educational, subscription-based websites that feature short, animated movies for kids that teach about science, social studies, English, math, art, health, music, and technology. [Lessons 1 and 2]

**Creative Commons.** A nonprofit that licenses images, music, and videos with clear terms for public usage. Go to http://creativecommons.org to explore its licensing options and image resources. See also Images, sources of.

**Blog, blog post.** In education, a collection of a student’s thoughts, questions, writing, and views on the world posted on a personal place on the Internet. See kidblog.org for an easy-to-use tool for blog creation. [Lessons 1, 3, 12, 17, and 18]

**Book Creator.** An easy-to-use app for creating an eBook. Book Creator allows the user to add text, images, video, and audio to each page of the eBook. The author can export the authored text to email or their iBook shelf, or share it with the world on Apple’s iBookstore. See Google “Book Creator tutorial” for additional information. [Lesson 10]

**Backchannel.** Means for maintaining a simultaneous real-time online conversation during a presentation or group activity. See Edmodo, Google Drive, Twitter, Padlet. For a sample, check out http://learnitin5.com/Twitter-getting-started.

**Similar tools:** GarageBand, iTalk, Voice Memos

**Similar tools:** e-Book Magic, Scribble Press, StoryKit
**Digital portfolio.** A collection of student work samples—blogs, digital images, multimedia presentations, audio files, and the like—stored in an electronic format that can be shared digitally.

**Diigo.** See Bookmarking sites.

**Discovery Education.** An education website for administrators, teachers, and students, with free resources on a variety of topics. http://www.discoveryeducation.com/

**Drawing Pad.** A digital art kit that allows students to share their thinking visually through drawing or sketching with digital crayons, colored pencils, markers, and paint. Students can add stickers, choose a variety of background templates, or edit photos by marking them up. All art can be saved to the camera roll on the iPad and then emailed to the teacher or a student portfolio. [Lessons 1, 2, 5, 13, 14, and 18]

■ Similar tools: Whiteboard, Doodle Buddy

**Dropbox.** A free cloud-based file storage system that allows you to upload and share files across devices. Dropbox replaces the need to email files or save them to a USB. Kids can access the Dropbox designated for student use and open or share files wirelessly. [Lesson 7]

**eBook, electronic book.** A book published in digital form that includes text, images, or both and is readable on an electronic device or eBook reader.

**eBook Magic.** An easy-to-use eBook creator best suited to students in the early elementary grades. Page templates allow students many choices for page layout and photos, and drawings can be easily added from the camera roll. Finished eBooks can be shared via the iBookshelf or emailed as an ePub.

**eBooks, creating.** See Book Creator, eBook Magic, StoryKit

**eBooks, sources of.** Commercial sources: Kindle, iBooks, and NOOK Kids. Teacher-created eBooks (see eBooks, creating) can be tailored to specific content. [Lesson 10]

**Edmodo.** A closed social network designed for use in schools that provides a safe, online place for teachers and students to engage in discussion, respond to one another's thinking, and share photos, links, and documents. For more information visit the Edmodo help section at http://help.edmodo.com/ [Lessons 4, 7, 9, 11, 14, 15, 16, 19, and 20]

■ Similar tools: TodaysMeet, Chatzy, Twitter, Google Drive

**Explain Everything.** An app that allows the user to draw, annotate, narrate, and animate. You can import images, text, presentations, and movies and use a variety of drawing and audio recording tools to annotate or personalize your learning. http://www.explaineverything.com/ [Lessons 6, 8]

**Fake websites.** See Websites, fake.

**Flickr.** A photo-sharing website with flexible privacy controls. Explore Flickr at http://www.flickr.com. See also Images, sources of.

**Google Drive (formerly Google Docs).** A suite of apps that provide digital storage and same-time group collaboration on documents, spreadsheets, presentations, etc. Google Drive's online workspace and variety of applications are stored in the cloud and accessible anywhere. Go to https://drive.google.com for information and directions. [Lessons 16, 17, 18, 19, and 22] See Backchannel.

**Google Earth.** A virtual globe and map program that provides aerial views of places around the earth. earth.google.com

**Google Forms.** See Google Drive.

**Google Hangout.** A Google+ app that allows groups to meet, chat, and broadcast their conversations from different locations. For information go to http://www.google.com/+learnmore/hangouts/ [Lesson 18]

**Google Images.** A service that uses a keyword to search the Web for images. Images may be copyright protected. See also Images, sources of.

**Google spreadsheets.** See Google Drive.

**Images, source of.** See Wikimedia Commons, Flickr, Creative Commons, Google Images, Photo Pin.

**iMovie.** A for-purchase video creation tool that is available for Mac products, used to create movies that incorporate video, still images, audio narration, music, and sound effects. The iPad version is better for beginners because it's more limited in choice, but not so limited that kids lose their creativity. This YouTube video shows you how to use the iPad app: http://www.youtube.com/watch?v=APQhVuQXiuM. [Lessons 13 and 22]

■ Similar tools: Animoto, Photo Booth.

**Incompetech.** A royalty-free music-sharing site licensed under Creative Commons. Music is free to download and use in student media projects; the only requirement is for
users to cite the artist. Music is sorted by genre and feel (action, humorous, suspenseful), making it easy for students to find the perfect soundtrack for their multimedia projects. http://incompetech.com/music/royalty-free/

KeepVid. A website where you can store videos downloaded from other sites. A site like KeepVid allows you to prescreen and select appropriate videos for student access and simplifies the learner’s range of choices. [Lesson 16]

Keynote. Presentation software that allows the user to add text, images, video, and animation to a preset template. For a video tutorial see http://www.youtube.com/watch?feature=player_embedded&v=8OEb92Fq0_g. [Lesson 18]
  - Similar tool: PowerPoint


KidRex. KidRex is a kid-safe, kid-friendly search engine developed by Google. Google Custom Search accesses a variety of topics, compiles kid-related websites, and filters for inappropriate content. http://www.kidrex.org/[Lessons 2 and 18]

LaDiDa. Song-creating app for the iPad (or iPhone or iPod) that allows the user to pick a style and a tempo and then turns sung or spoken lyrics into a song. [Lesson 21]
  - Similar tool: Songify

LiveBinders. See Bookmarking sites.

NASA, For Students site. The National Aeronautical and Space Administration (NASA) has a variety of websites that bring high-quality images, videos, and information about our solar system into the classroom. The For Students site is designed for K–4 students. http://www.nasa.gov/audience/forstudents/k-4/index.html [Lesson 2]

National Geographic Kids. The free National Geographic Kids site contains a collection of images, a blog, short articles, and videos about countries, cultures, animals, and more. http://kids.nationalgeographic.com/kids/[Lessons 1 and 2]

Online corkboard. See Padlet.

Padlet. (formerly called Wallwhisper). A free, easy-to-use online corkboard. With a simple account sign-up, you can create digital corkboards, give students a link, and allow them to post sticky notes, links, photos, and videos. For a tutorial, check out https://vimeo.com/28060403. [Lesson 11]
  - Similar tool: Pinterest

Pages. A word processing tool for Apple devices that works with Mac, iPad, and iPod touch that can be used to compose and publish writing. Pages provides a variety of word processing templates that are easy to use and customize based on student needs. To view a tutorial, visit http://www.youtube.com/watch?feature=player_embedded&v=Y095hJmoMdo. [Lesson 1]
  - Similar tool: Microsoft word

Photo Booth. An Apple app that can be used to capture still or video images with the built-in camera. Photo Booth has built-in special effects and features that alter photos, including a thermal camera, comic book style, and famous landmarks background. [Lesson 23]

Photographs, sources of. See Images, sources of.

Photo Pin. A source of blog photos, searchable by topic, that includes appropriate photo credits: http://photopin.com. See also Images, sources of.

Podcast. Audio and video files streamed online to a computer or mobile device. Podcast is a term we use in this book to describe still-frame images or screenshots that are narrated into a digital file that plays as a movie. SonicPics is an easy tool for students to use for creating podcasts that combine photos, drawings, text, and narration to share with families on a classroom website or via email. [Lessons 6, 8, and 17]

Publishing apps. A variety of apps that provide ways to create anything ranging from a simple text to an eBook, podcast, or movie. See Book Creator, eBook Magic, iMovie, Keynote, Kidblog, Pages, SonicPics, StoryKit.

QR (quick response) code. A matrix bar code that holds information about a tool or product. A QR code can be scanned by a mobile phone, iPad, or other device with a QR scanning app to link to stored data (including iMovies and audio recordings) on websites without typing the URL. You can create, print, and display your own QR codes to give students quick access to read-alouds, teacher-created minilessons, and one another’s work. Go to www.qrstuff.com to generate QR codes. [Lessons 13, 21, and 24]

Read-alouds, recording. See Audio recording.
Recorder HD. An app for the iPad that allows the user to record and store an audio file. [Lesson 18]

Safari Montage. A subscription-based video library for schools, containing movies and clips from Schlesinger Media and BBC.

Screenshot. A photograph of the screen on a device. Screenshots are usually saved in the photo roll or on a desktop. Taking screenshots is a quick and easy way to capture work in a small file that can be emailed or shared with the teacher or with other students. Each device has a different way of doing this, which can be found in an owner's manual or by doing a quick online search. You might start at this website to see if your device is listed here: http://take-a-screenshot.org/.

Songify. A free song-creating app best for teacher-led activities. [Lesson 21]

- Similar tool: LaDiDa

Songs, creating. See LaDiDa.

SonicPics. SonicPics is an easy-to-use narrative slideshow tool that allows students to create their own podcasts. The app allows you to load images from your iPad or iPhone into a slideshow and add an audio recording that narrates the slideshow into an .m4v movie. These movies can be saved on the device, exported to YouTube, or shared via email. For a demonstration on how SonicPics works, visit www.sonicpics.com. [Lessons 6 and 17] See also Podcast.

StoryKit. A free iPhone app (iPad compatible) for authoring and publishing digital text. The simple format—with in-app drawing tools and audio recording capability—does not export the digital text into a traditional page-turn format, but instead uploads all pages to a website that can be easily shared.

Tinyurl.com. Free url-shortening service that provides aliases for redirection to long urls. Tinyurl avoids the need to type long urls.

Twitter. Online social networking and micro-blogging service that allows users to post 140-character text messages. [Lesson 18]

url (uniform resource locator). A Web address.

Video clips, sources of. See Safari Montage, BrainPOP, Discovery Education, YouTube, Creative Commons. See also KeepVid.

Video, recording. See iMovie, Photo Booth, Web cam.

Vimeo. A video-sharing website on which users can upload, share, and view videos. Check out the Vimeo website at vimeo.com to see how create, watch, and upload videos. [Lessons 8 and 18]

- Similar tools: YouTube, TeacherTube, SchoolTube

Wallwisher. See Padlet.

Webcam. A video camera that feeds its images into a computer or computer network. Many computers or tablet devices have built-in photo or video cameras. [Lesson 23]

Websites, fake. See the list at the end of Lesson 4: Phil Bradley’s catalog of fake websites, Buy Dehydrated Water, Dangers of Water, Save the Pacific Northwest Tree Octopus, Dangers of Bread, Petrol Direct, The Dog Island. [Lesson 4]

Websites for young children. See Animal Planet, BrainPOP Jr., KidRex, NASA, National Geographic KIDS, Wonderopolis.

Wiki.answers.com. Website on which you can ask a question and either find or wait to receive an answer. [Lesson 9]

- Similar tools: Twitter, Wonderopolis

Wikimedia Commons. A database of free-use images, sound, and other media files. Go to commons.wikimedia.org to research a topic. [Lesson 15] See also Images, sources of.

Wonderopolis. An interactive website that posts a Wonder of the Day—including a video clip, short article, and links to additional information—and responds to students’ questions. http://wonderopolis.org/ [Lessons 1 and 2]

Word processing. See Pages and Publishing apps.

YouTube. Source for sharing and accessing video clips on millions of topics. Go to YouTube and type what you want to know (e.g., “how to blog”) in the search box for a selection of video examples, explanations, demonstrations, etc. [Lesson 16] See also KeepVid.

- Similar tools: Vimeo, TeacherTube, SchoolTube
Organized around Steph and Anne’s active literacy learning framework, Connecting Comprehension and Technology will help you to teach your students how to:

**Monitor Comprehension**
- Reflect Thinking with a Drawing Tool
- Think About Online Information
- Notice Internet Distractions
- Evaluate Internet Sources

**Activate & Connect**
- Annotate Thinking Digitally
- Narrate Thinking with Podcasts
- Explore Web Features
- Compare Text and Web Features

**Ask Questions**
- Share Questions Online
- Read an eBook to Answer Questions
- Ask Questions in Online Discussions
- Research Lingering Questions Online

**Infer & Visualize**
- Visualize with Digital Drawings
- Create and Illustrate Digital Poems
- Infer with Visual Cues
- Infer with Media Cues

**Determine Importance**
- Organize Thinking on a Spreadsheet
- Research Digitally Archived Questions
- Collaborate on a Spreadsheet
- Evaluate Infographics

**Summarize & Synthesize**
- Produce a Media Project
- Create an Inquiry Movie
- Record a Video Book Review
- Create a Book Trailer

“Technology is a natural vehicle for Toolkit’s active literacy practices.

When we begin our technology journey by grounding it in time-tested comprehension instruction, we ensure that our use of technology is meaningful and authentic. We help students see the natural links between the strategies they use in print text and the strategies they need to use when navigating the vast, digital world. Offering them many opportunities to practice these strategies in new contexts helps them transfer and apply their learning across subjects and in new and creative ways.”

— Stephanie Harvey, Anne Goudvis, Katie Muhtaris, and Kristin Ziemke

Through their celebrated Comprehension Toolkit series Stephanie Harvey and Anne Goudvis present an active literacy learning framework that grounds students in the nonfiction reading and thinking strategies they will need throughout school and into college and careers. In Connecting Comprehension and Technology Steph and Anne invite teachers to join them in Katie Muhtaris’ and Kristin Ziemke’s classrooms to envision and embrace technology as a powerful tool for extending these Toolkit practices and enhancing literacy instruction and innovation.