

# Connected Reading Is the Heart of Research

*This article introduces a new framework for teaching adolescents to read: *Connected Reading*. By sharing instructional practices and describing digital tools, the authors argue that a mindful, social model of connected reading is a crucial part of any research activity.*

**I**n our pockets and on our desks, finding its way into school, work, and home, the Internet is everywhere. And because of this ubiquity, the nature of literacy has changed.

Our students have shifted much of their reading and research from print-based media—books, magazines, and newspapers—to digital texts, such as databases, webpages, and instant messages. Over the last two decades we, as teachers of English, have been scrambling to keep up. Computers, Kindles, iPads, Androids. Screens dominate their reading lives, and when we ask them to “look something up,” they turn to Google or Yahoo. We know these reading habits (which skew toward skimming) and search habits (which rely on top choices that appear on the first page of results) are inadequate for the complex reading and research demands of college, career, and civic life.

Thus, while digital texts open many opportunities for readers, the amount and quality of information available presents new demands. In the early days of the emerging World Wide Web, Jeffrey D. Wilhelm, Paul D. Friedemann, and Julie Erickson argued, “We believe that to be literate in the twenty-first century, students must become composers and readers of hypermedia. They must understand its possibilities, uses, and design. Since our future texts, even more so than our current ones, will be hypertextual, students will need to understand the conventions and construction of such texts” (20). Their message still holds. As teachers, we cannot ignore the differences between

researching print and digital texts, hoping that students can transfer traditional strategies (such as using note cards) to the complex network—and reading experience—of digital texts.

We must help them develop mindful practices while reading digitally, which, in turn, may lead to more effective researching and writing. To that end, we introduce a new framework for teaching adolescents to read: *Connected Reading*. The practices of Connected Reading are both *mindful* and *social*, an intertwined set of habits that can lead students to deeper understanding with all kinds of texts.

## Encountering, Engaging, Evaluating: Practices of Connected Reading

Alan, a ninth grader when Hurricane Sandy hit New York City, scoured the Internet for information before, during, and after the storm ravaged the city. He found computer models of the storm’s path on YouTube. He read articles from local news outlets about the flooding in Manhattan. He researched ways that engineers could prevent disaster in the future. Using his smartphone, or what he affectionately calls “my own computer,” Alan collected his knowledge through a variety of tools that fit in his pocket. From video clips to news stories, his phone allowed him, as he says, to “keep records” of his research—and to share his learning with others.

Like many teens, Alan regularly reads, views, and listens on his smartphone, and whether he is creating a school project or, more likely, searching for his own interests, he relies on digital texts. But

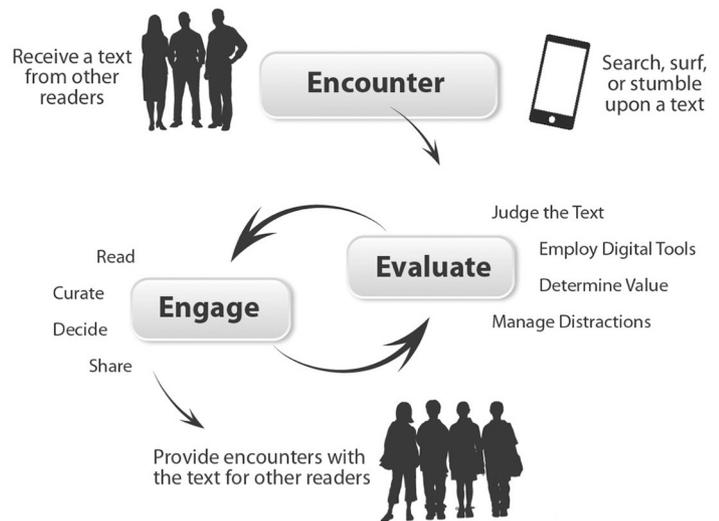
how does he find reading material? And, after he locates it, does he read it critically? Finally, what does he do with each text after he reads it? We know that having a “computer in his pocket” provides Alan with amazing possibilities, but what happens when distractions lure him away from his purpose?

It is with these types of questions in mind that we visited classrooms around the country learning from teens like Alan. As teacher-researchers, we led teens through lessons on digital reading, and we surveyed more than 800 students, interviewing 23. We asked them questions about their reading habits, on-screen and off, and we learned that teens, like adults, vary in their approaches to reading digitally. Some, like Alan, are quite purposeful in their searching as they conduct self-defined inquiries. Others surf or stumble from site to site, spending a great deal of time reading short-form texts on social networks. Some choose to read long-form articles or ebooks on mobile devices. From the data we collected, we were able to capture a picture of *what* practices these digital readers employ.

Then, from this research, we developed a model of Connected Reading,<sup>1</sup> presented in Figure 1, demonstrating how multiple readers receive and share texts. Within this network of Connected Readers, individual readers participate in three primary practices, as well as related sub-practices:

- Encountering—the way in which the reader initially makes contact with a particular text, whether by searching for new information online or receiving a link from a trusted friend or adult. Four sub-practices include receiving, searching, surfing, and stumbling.
- Engaging—the way in which the reader interacts with the text after initially encountering it. Engaging can begin and end within a split second, or a digital text can be saved for later reading and rereading. Four sub-practices include deciding, curating, reading, and sharing.
- Evaluating—the way in which the reader finds value in a digital text. Each reader will determine how important the text is to *this* reader at *this* moment. Four sub-practices include gauging overall interest, critiquing the text itself, employing digital tools with the text, and choosing to manage distractions.

FIGURE 1. Model of Connected Reading



A model of “Connected Reading” by Kristen Hawley Turner (@teachKHT) and Troy Hicks (@hickstro)

From the book, *Connected Reading: Teaching Adolescent Readers in a Digital World* (Published by NCTE, 2015)



As Figure 1 shows, Connected Reading is a mindful, social practice, and it is recursive, not linear, in nature. In addition, Figure 2 defines the sub-practices of Connected Reading that we identified in our work with teens.

Taken in sum, understanding and teaching these practices can help students become better readers, researchers, and writers. Building on a model of Connected Learning (Ito et al.), our framework for Connected Reading also recognizes that reading occurs outside of school, when students enter open networks that allow them to learn about their interests. However, we can reflect on these practices of Connected Reading as we ask students to research for school-based tasks as well, a purpose we will turn our attention toward now.

### Connected Reading in the Classroom

As we design inquiry-based assignments to engage teens, we can consider a variety of questions:

- How will my students encounter texts in their research? From me? From Web searches? From databases? From peers?
- How can I help them to manage distractions that arise during their research? Are

**FIGURE 2.** Sub-practices of Connected Reading

<b>Encountering a Text</b>	
Receiving	Getting a digital text by means of engaging with a website or app (what's in the headlines) or via link from a friend or colleague
Surfing	Skimming and scanning the Internet with little intention, typically for leisure
Stumbling	Following related links or recommendations from social networks or Web services (such as Twitter or Pinterest), or curated websites
Searching	Seeking information actively with specific search terms; comparing and contrasting information from various websites
<b>Engaging with a Text</b>	
Deciding	Filtering texts to be read or discarded; deciding when and how to read
Curating	Organizing texts for reading and archiving; establishing additional searches or news feeds based on current feeds
Reading	Skimming, scanning, digging in; using multimedia; annotating; responding; interacting; monitoring; reading beyond a given text
Sharing	Offering public response to a text; posting or sending it to others
<b>Evaluating a Text</b>	
Determining value	Considering interest, overarching intentions, and immediate purpose to identify how useful the text might be in the moment and in the future; situating the text in a broader, ongoing conversation
Judging	Critiquing the quality of a text (both content and form) as it compares to other similar texts
Employing digital tools	Identifying and utilizing the most appropriate tools to read, annotate, respond to, and share a digital text
Managing distraction	Self-regulating one's attention related to the specific reading task and digital tool in use

there browser extensions or mobile apps that can help? Are there habits of mind that I can teach?

- **Will they need to curate texts for this project?** What tools can they use to keep track of their sources? How will they share

these sources with peers? Will they be required to annotate their sources?

- **To what degree do I want them to make their evaluation of texts visible?** What kinds of thinking do I expect them to do and what tools could help?
- **To what degree do I want to explicitly structure their engagement with the texts they encounter?** Will these interactions be scaffolded through a certain technology and task, or will they communicate with their peers without guided support?
- **Where and when will students have the opportunity to share their reading, writing, and learning with others, both online and off, both in school and outside of school?**

Even in these questions, there are a variety of assumptions embedded: What is the nature of a credible source? What amount of material would we expect them to read and synthesize? What are the ways we would invite them to work with one another? All of these questions are worth exploring.

For teens who do the majority of their research in digital spaces, the cognitive demands of searching and reading critically may, as it does for many adults, overwhelm them (Carr). However, mindfulness, or the intentional and critical application of reading strategies and metacognition, can lead to sophisticated uses of technology (Thompson), allowing us to accomplish goals we wouldn't otherwise be able to do on our own. Put another way, technology can be a tool for smart thinking when we choose to employ it in smart ways.

The reflective questions above derive from Connected Reading practices, and it is with these practices in mind that we explore the classrooms of three teachers—Nicole, John, and Rachel<sup>2</sup>—and think about the questions they ask themselves as they plan research tasks for their students.

Certainly, there are many digital tools that have potential to aid in developing reading, writing, and research skills. However, as the vignettes that follow demonstrate, teachers need to think carefully about the tools they will introduce—and those that will form the basis

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of their instruction. In these descriptions, we offer many tools, all of which we describe in a table at the end of the article, yet we focus on Citelighter, Ponder, and Feedly as we consider how digital tools can be used to help build the practices of Connected Readers.

### Managing Distractions and Curating

Nicole is about to assign her “Senior Inquiry Project,” which asks students to select a literary text and then research across fiction and nonfiction to identify the text’s literary, political, or historical significance. From past experience, she knows that her seniors need help managing their research projects. Most of her students rely on Internet searches to find information, yet many have not developed the curation skills needed to keep track of their sources. Cutting and pasting is easy for them; documenting where they found the quotations, statistics, or other facts is not. Thus, Nicole kicks off the unit with lessons on managing distractions and curating during research.

Nicole knows that many of the teens become easily distracted by links, videos, or social media while conducting research, so she decides to introduce them to several digital tools in an effort to overcome these issues. First, she has them install Adblock onto their Google Chrome browsers. Adblock eliminates nearly all advertising in search engines and on individual websites. Still, distractions can arise in the form of headers, footers, and sidebars, so Nicole invites her students to use Evernote’s Clearly, a browser extension that converts a cluttered webpage into a distraction-free, book-like reading experience. Finally, knowing that many students read often on their mobile devices, she demonstrates how to save a copy of any Web resource to Pocket, a service that will allow them to access the exact text of a webpage later for deeper reading from their smartphones.

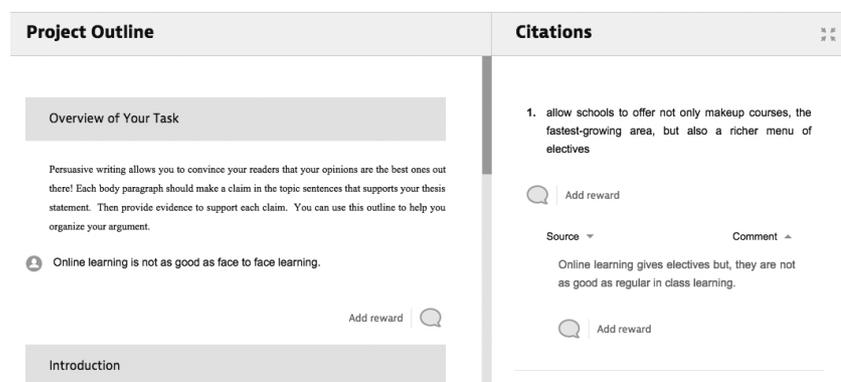
Moreover, Nicole wants the students to engage with tools that will also be useful to them after they leave her classroom and have moved on

to college-level research; she wants to teach them higher-order research skills. Though she presents many possibilities for curating and organizing Web-based resources, such as Diigo, Evernote, and Scrible, Nicole focuses her classroom instruction on Citelighter, as she believes that the outlining and bibliographic capabilities with this tool will best help her struggling writers. She also chooses this option because Citelighter integrates seamlessly with Google Docs and because her students will need to share their final bibliographic information in MLA format, which Citelighter supports.

She invites her students to use the Citelighter toolbar to collect sources and to capture information as they research. Nicole wants students to practice mindful reading as they construct their research projects. Citelighter, which uses website metadata to attach bibliographic information to everything that students capture, helps Nicole’s students to focus on reading the text critically and intentionally—without the extra distraction of noting every bibliographic detail of the source. They use Citelighter to document their own reading, writing brief summaries in the notes section as they collect relevant quotations (see Figure 3).

As the students proceed through their inquiries, Nicole monitors their selection of resources and the information that they capture from their reading in their Citelighter projects. Along with relevant bibliographic information, she wants to make sure that they are creating adequate summaries and noting key ideas from what they have read. She is pleased to see many of them using Adblock and Clearly to help keep them focus on the task. She knows that her efforts to teach tools that will allow them to manage distractions and curate

FIGURE 3. Screenshot of Citelighter Outline and Citation View



information will help them as readers, writers, and researchers.

### Annotating and Engaging

Teachers have adopted many tools for helping students to engage with print texts. Sticky notes, highlighters, and coding schemes have become commonplace as students make their reading (and thinking) visible (e.g., Beers and Probst). Surprisingly, when we spoke with teens and their teachers during our research study, we learned that despite the fact that a variety of tools for digital annotation exist, many do not transfer their print annotation skills to digital texts. To make the most of their digital reading, however, students *must* develop close reading skills that include annotation of digital texts.

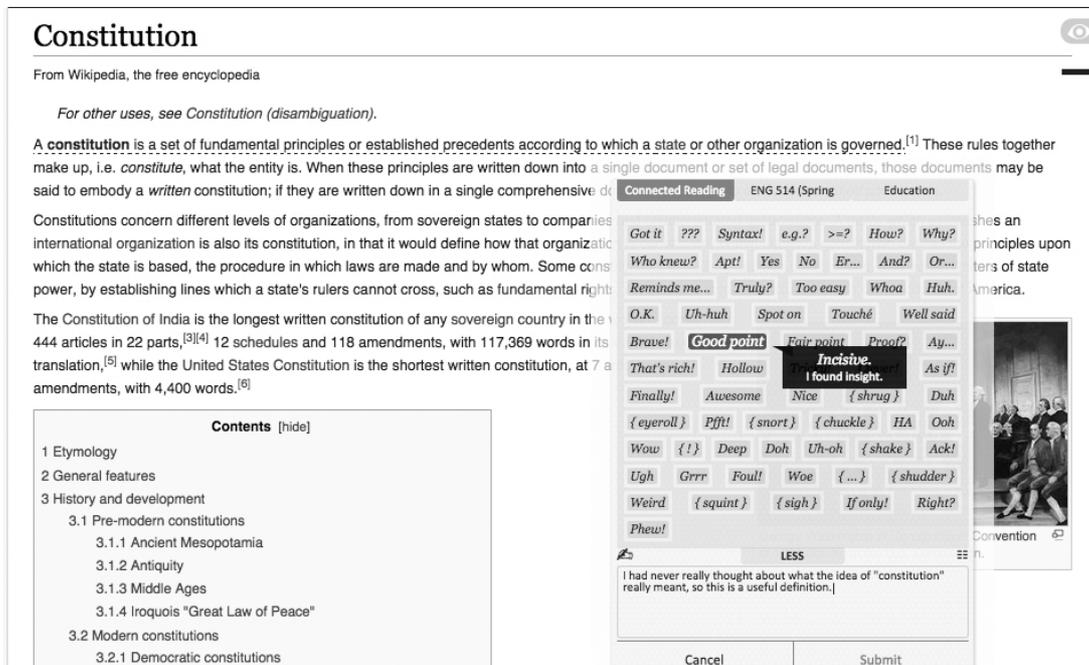
Thus, John, a high school social studies teacher, decides to incorporate digital annotation into his class's inquiry into Constitutionalism. He selects Ponder, a Web-based app, to scaffold students' reading of difficult texts. Ponder allows readers to comment directly on the screen using pre-formed responses, such as "I'm confused," "I'm dubious," or "I'm in awe." Students also have the option to elaborate further in writing (see Figure 4). These "micro-responses" are visualized as

highlighted text, creating a color-coded map of cognitive, analytic, and emotional annotations. The micro-responses are also shared to a private activity page for the class, which allows individual students to make their thinking visible both to John and to their peers. As an ever-changing feed of information from his students, this activity page also allows John to quickly assess the way his entire class is engaging with a webpage or PDF.

Before a class discussion, John selects excerpts from the assigned reading based on students' responses. The Ponder tool allows him to pull these features into a separate list on the class activity feed, which is projected on the board. The reading, including the annotations, fuels the discussion around this shared text. Later, during their individual research, students create micro-responses on other digital texts, ones that they had chosen together in small groups, and their annotations become shared inquiry as their classmates form thesis statements for a research essay.

Because he asked them to include evaluative comments and questions about the individual sources, John is able to quickly assess students' engagement with the texts they have chosen based on the number and length of their responses using Ponder. By first annotating webpages with the

FIGURE 4. Screenshot of Ponder Annotation Tool Used on Wikipedia



Ponder tool, and then engaging with their peers in conversation about those webpages, students are able to share their thinking with one another, ask questions, and offer interpretations of the text. Online conversations spur further discussion in the classroom and help students to think critically about their research.

Digital tools for annotation exist on all platforms and for various kinds of texts. Tools such as Scribble (for websites), Diigo (for websites and PDFs), and Notable (for PDFs) can serve this purpose, depending on exactly what features and collaborative interactions a teacher might want. Considering ways to help students make their digital reading visible—to themselves, their peers, and their teachers—as they conduct research will support them as readers throughout the process.

### Encountering and Sharing in a Network

Rachel wants her students to engage in broader conversations outside of her classroom about the topics that interest them. She also wants them to see reading as a social activity within her classroom walls. To meet these goals, she has decided to allot 30 percent of her students' independent reading time to focus on Genius Hour projects (<http://geniushour.wikispaces.com>). Having become more and more popular in the past few years, "Genius Hour" is similar to Google's concept of "20% time" for its employees, where students can develop their own inquiry questions and explore their passions during the school day. Moreover, advocates of independent reading, such as Penny Kittle and Donalyn Miller, suggest that the majority of students' reading choices be made based on their own interests, and Rachel knows that those texts can exist both in print and online.

To fuel their research, she asks students to establish an academic Twitter account and RSS feed using an aggregator, or a tool that collects updated content from the Web in one organized space. Each week, as they read new content from their RSS feeds, the students synthesize their reading and their learning by posting via Twitter, where they share (incredibly) brief summaries and quotes from their reading with their personal learning network (PLN). Rachel focuses her introductory lessons on how students can encounter useful texts through

RSS feeds and how they can post their thoughts to the class hashtag.

She kicks off this set of lessons by showing the video "RSS in Plain English" (<http://www.commoncraft.com/video/rss>) and asks students to consider how websites and blogs push content to readers. Because it is both a Web-based tool as well as an app that can be installed on their smartphones, she invites students to use Feedly to find feeds that interest them and support their Genius Hour inquiries. For instance, one of her students, Javon, is particularly passionate about sports, and has become interested in the topic of whether or not college athletes should be paid. He subscribes to a variety of general sports sources from ESPN, *Sports Illustrated*, and a few individual sports columnists. His reflection on his choices is shown in Figure 5. This Reading List Organizer becomes Rachel's primary means of assessing students' "SSR with RSS" reading (Hicks).

As students find reading material and share it with their peers via Twitter to their class hashtag, Rachel asks them to select certain articles that they can read together in small groups, face-to-face, during their Genius Hour time in class. Students continue to find new reading each week, sharing their insights and questions with one another. Throughout the year, Rachel thinks carefully about how students encounter texts in their out-of-school reading, and she hopes to make their practices more mindful through her lessons.

### Applying the Practices of Connected Reading during Research

Because they recognize that their students are, indeed, going to read digital texts, teachers like Nicole, John, and Rachel are thinking critically and carefully about how to support their students as readers, both in print and on screen. For more ideas, we invite you to try some of the tools listed in Figure 6 and visit our Connected Reading wiki: <http://connectedreading.wikispaces.com/>. The computers in our students' pockets can be used for much more than snapping selfies and playing games. Indeed, if we want them to be critical and creative researchers, these teachers provide three snapshots of instruction that actively engages students as Connected Readers during research.

This is crucial for a variety of reasons, because, as we have argued before, "English teachers must

**FIGURE 5.** Sample Feedly Reading List Organizer

RSS FEED	PERSONAL/ACADEMIC	WHAT I HOPE TO READ ABOUT AND LEARN FROM THIS FEED
SI.com	Personal and Academic	Because I am interested in sports, I feel that this will be a reliable source of information for me and I look for feature stories about college athletes.
ESPN.com College Section	Personal and Academic	Useful because sometimes the stories are about college athletes being paid.
My Google Alert for "college athletes paid"	Personal and Academic	Also useful because the stories are specifically about college athletes being paid and are often op-ed pieces for both pro and con.

**FIGURE 6.** Tools Mentioned in the Article

TOOL	AVAILABLE AT	HOW IT SUPPORTS CONNECTED READING
Adblock	<a href="https://getadblock.com/">https://getadblock.com/</a>	Removes banner ads and other clutter from webpages. <i>Managing distractions</i>
Citelighter	<a href="http://www.citelighter.com/">http://www.citelighter.com/</a>	Helps readers to focus on reading while quickly gathering bibliographic information about the source. Integrates with Google Docs and provides outlining tools for scaffolding writing instruction. <i>Curating, reading, managing distractions</i>
Clearly	<a href="https://evernote.com/clearly/">https://evernote.com/clearly/</a>	Removes unnecessary ads, images, etc. to create a clean layout. <i>Managing distractions</i>
Diigo	<a href="https://www.diigo.com">https://www.diigo.com</a>	A social bookmarking tool that allows readers to annotate webpages and PDFs and to participate in group conversations about the texts. <i>Curating, reading, sharing</i>
Evernote	<a href="https://evernote.com/">https://evernote.com/</a>	Works across devices to allow students to organize their research. <i>Curating, reading, sharing</i>
Feedly	<a href="https://feedly.com">https://feedly.com</a>	Collects and organizes RSS feeds in an app or a Web interface. Students can subscribe to blogs, news sources, podcasts, and other web content related to their inquiries. <i>Encountering, curating, sharing</i>
Google Alerts	<a href="https://www.google.com/alerts">https://www.google.com/alerts</a>	Allows students to subscribe via email or RSS feed to particular search queries. They can set limits to these queries and receive notifications when new content is published. <i>Encountering</i>
Notable	<a href="https://www.notablepdf.com/">https://www.notablepdf.com/</a>	Allows students to annotate PDFs in the cloud. It synchs with Google accounts and enables sharing of the annotated document. <i>Reading, sharing</i>
Pocket	<a href="http://getpocket.com/">http://getpocket.com/</a>	Works across devices to allow students to save texts that they want to read later. <i>Curating</i>
Ponder	<a href="http://ponder.com">http://ponder.com</a>	Allows students to comment directly on the text using preformed responses and to elaborate further. Responses are collected across the class to create a visual of the students' responses. <i>Reading, sharing</i>
Scrible	<a href="http://www.scrible.com/">http://www.scrible.com/</a>	An annotation tool that allows readers to use highlights and sticky notes, to categorize and organize research, and to share with others. <i>Curating, sharing</i>
Twitter	<a href="https://twitter.com/">https://twitter.com/</a>	Originally characterized as a microblogging platform, Twitter has become a tool that teachers and students can use to participate in conversations both inside and outside the classroom. Hashtags organize conversations. <i>Encountering, sharing</i>

embrace a new role: We must advocate for digital literacy, not just technology, in a way that reconceptualizes our discipline. We must dump the dittos, throw out the workbooks, and remix our teaching for a digital age” (Hicks and Turner 61). Reading continues to be a crucial part of any research activity, and with the tools and processes available we can now invite our students to be Connected Readers and researchers. Yet, it is up to us—as experts in reading, writing, and critical thinking—to make these first steps into new kinds of reading, to make Connected Reading the heart of research. 

### Notes

1. A full description of our research and our model of Connected Reading can be found in our NCTE book *Connected Reading: Teaching Adolescent Readers in a Digital World* (Turner and Hicks).
2. These individuals represent composites of several actual teachers. The classroom practices that we describe come from those we have seen or delivered firsthand in our research, as well as our conversations with Alex Selkirk, who works closely with teachers that use the Web app Ponder in their classes. For allowing us to synthesize and summarize their stories, we thank our colleagues.

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### READWRITETHINK CONNECTION

Lisa Storm Fink, RWT

As stated in the article, students learn about the purposes and techniques of annotation by examining text closely and critically. In this lesson plan from ReadWriteThink.org, students study sample annotations and identify the purposes annotation can serve. Students then practice annotation through a careful reading of a story excerpt, using specific guidelines and writing as many annotations as possible. Students then work in pairs to peer review their annotations, practice using footnotes and PowerPoint to present annotations, and reflect on how creating annotations can change a reader’s perspective through personal connection with text. <http://bit.ly/11dNS41>