



NTICIPATION GUIDE

		Agree	Disagree
1.	Technology has had a greater impact on social networking than on school achievement.		
2.	It is impossible to make the Internet safe for children.		
3.	Computers and the Internet have replaced textbooks as the dominant instructional tools in public education.		
4.	The computer is morally neutral.		

5. Virtual worlds and avatars are a passing fad.



In the middle of the last century, automobiles all had manual transmissions and no air conditioning. There were no cellular phones, and there were no convenient ATMs to drive up to for fast cash. Passenger planes were propeller driven only. There were also no televisions, automatic dishwashers, digital clocks, or hundreds of other technological conveniences that are now taken for granted in most American homes. The raging revolution in technology should change the fundamentals of classroom instruction and that revolution is well underway. This chapter examines the impact of technology on



content literacy. Indeed, whenever we attempt to pin this dynamic topic down for a moment it shifts shape in an instant. With that caveat, we examine the impact of technology and offer some resources that should be very helpful in your teaching.



LEARNING OBJECTIVES

- o Explain how the meaning of literacy continues to shift in the light of technology.
- o State several appropriate uses of technology in the classroom.
- o Define the terms multimedia, wiki, blog, virtual world, and social media.
- o State several current and potential misuses of the Internet.





TECHNOLOGY: REVIEWING THE PAST AND IMAGINING OUR FUTURE

As some of the Anticipation Guide statements suggest, even great minds can fail to divine the future or see the potential in technological innovations that in retrospect are obvious. It is easy to chuckle knowingly over the flawed technology predictions of the past (e.g., *teachers will be replaced by robots*). We can examine this claim through the eyes of Dr. Machio Kaku (Kaku, 2014), a professor of theoretical physics at the City University of New York and a cofounder of string theory. In his quest to understand a variety of topics including artificial intelligence, he interviewed over 200 prominent scientists including Nobel laureates from the United States and abroad about the influence of computers and robots. They agreed that the growth of computer power based on Moore's law shows that this technological power doubles every two years. To put that finding in perspective, our cell phones today have more computer power than all of NASA with its 1969 launch to put two astronauts on the moon.

While that is the upside of technology, the future use of robots is a bit more sobering. Robots lack human consciousness, and, while adept at performing precise, rule-governed tasks like playing chess, they fail miserably at crossing a busy city street safely (Kaku, 2014). The effort to produce driverless cars is a good example of the degree to which each and every condition must be thought out to program computers to take us to work and home safely.

It is much more difficult to predict the future. At the close of the stock market each day there are thousands of analysts and reporters who will tell you with certainty why the market went up or down, but most of them won't even hazard a guess about what the stock market will do the next day. Predicting what technology will do for—or to—the world in the next 50 or 20 or even 5 years is even more difficult. We believe it is safe to say that technology is here to stay and that it is a tsunami of change that will not stop. Populist politics are being fueled by social networks such as Facebook and Twitter. Technology is changing world politics. Is it changing the functionality of the American classroom?

Smaller, Faster, and Stronger

The ENIAC (Electronic Numerical Integrator and Computer) was the first modern computer built in 1946 after scientists realized that information could be represented by the absence or presence of electrical current (pluses and minuses). It weighed 30 tons, filled a large room, required a staff of engineers to keep it running, and operated with thousands of bulky vacuum tubes. Today, there are computers a million times more powerful than the ENIAC and small enough to fit into the palm of your hand. The portability of cell phones, notebook computers, wireless connectivity, and various tablets make it possible for us to communicate and to store and retrieve information almost anywhere. In just the past few years, the word *app* has entered the languages of the world. *App*, short for application, refers to hundreds of programs for handheld communication devices that allow the user to store and retrieve information as well as solve problems and manage daily activities. For example, carb counters help with diets, step apps chronicle our exercise patterns, and shark apps show where in the surfing world shark attacks have occurred on a daily basis. Jump drives the size of a stick of gum can store huge amounts of data. Technological changes are occurring so rapidly that it is almost impossible to predict even the near future. This is particularly true with respect to the storage of information.

The Technology Revolution in American Schools



View the website video clip on the Future of Technology in Education.

Computers and Smartboards are now ubiquitous in schools, with increasingly rare exceptions. It is readily apparent that high school students know more about digital technologies than the students of a quarter century ago. Most students use computers and cellular devices for word processing, conducting Internet searches, and participating in electronic social media such as *YouTube*, *MySpace*, *Facebook*, *Twitter*, and texting. Far less clear are the contributions of digital technologies to school achievement. Can high school graduates today read and comprehend better than their peers of 25 years ago? Are their mathematical skills superior? Do they know more about biology, economics, history, or any other subject area? One might expect some measurable improvements in achievement after so many years of technology in the classroom. Unfortunately, we are unaware of any systematic research that demonstrates this. Why might it be true that technology has yet to influence academic achievement?

Historically, innovative instructional technology tools such as computers, film, radio, and television have consistently met with resistance from teachers and educators at large. This failure of instructional technologies to be integrated into the classroom has been clearly demonstrated by Larry Cuban (1986) in his book, *Teachers and Machines: The Classroom Use of Technology Since 1920*. According to Cuban, instructional technology has consistently failed to bring about the revolutionary changes predicted by its advocates (Cuban, 2003, 2010). Beginning with



an examination of the introduction of motion pictures in the schools nearly a century ago, and continuing with the introduction of new forms of media such as radio and television, Cuban provides a convincing historical demonstration of how new educational technologies meet with only limited use by teachers in the classroom. For example, during the 1950s and 1960s a variety of mechanical teaching machines were introduced to public schools (Cook, 1962), a decade or more before the invention of microprocessors and digital calculators. At that time there were many educators who believed that teaching machines would change the fundamental character of education—or even replace teachers altogether. But even before microcomputers entered their first classroom, teaching machines had proven to be little more than a curious fad. Will computers in the classroom suffer the same fate?



Unfortunately, computers in the classroom may be used primarily to support lowend applications, such as word processing, that mirror rather than alter and improve existing teaching practices. Placing computers in the classroom will make no difference in achievement unless the technology is accompanied by teachers and students changing their assumptions about teaching and learning. A teacher-centered curriculum with an emphasis on narrowly defined standards and rote memorization combined with an assembly line mentality will render the best of technology impotent.

Other critics of the technology revolution in public schools argue that there is little evidence to support the benefits of classroom computer applications and that technology is a distraction in the classroom and may actually impair intellectual development, writing skills, and problem-solving abilities (Oppenheimer 1997, 2003; Postman, 1999). Given limited school financing and available time for the total curriculum, critics argue that music, art, and other subjects are systematically squeezed out of the curriculum as more instructional time and resources are being devoted to the support of technology. American political and business leaders seem to embrace the notion that technology is good and more of it is better. Only time will reveal the true value of technologically sophisticated classrooms and the unforeseen consequences of technology interventions. There is one certainty; by the time you read this chapter our presentation on technology will already be out of date.

LITERACY IN THE NEW MILLENNIUM

In Chapter 1 we defined content area literacy as the level of reading and writing skill necessary to read, comprehend, and react to appropriate instructional ma-



terials in a given subject area. Years ago this definition would have been limited to conventional print mediums such as road signs, newspapers, and textbooks, but now students must also become facile in the use of computers, the Internet, cell phones, software, iPads, and other technologies directly or indirectly related to reading and writing. Being literate in today's world requires the application of conventional reading and writing skills to software applications and the complicated universe of cyberspace.

Basic and advanced reading skills including word recognition, spelling, vocabulary, prior knowledge, comprehension strategies, and critical literacy are essential in using the Internet for academic purposes (Bean, 2016). Clearly, technology cannot replace conventional reading and writing skills because students who have difficulty spelling, read slowly, and have a limited understanding of the world outside their immediate community are unlikely to be able to acquire multiple literacies.

Software, Multimedia, and eBooks

Software refers to applications that run on computers, which include everything from encyclopedias and word processing programs to games and academic programs that support the full range of content areas. *Multimedia* refers to combinations of audio, text, graphics, and animation. Multimedia software refers to computer-based programs that combine two or more multimedia elements.

Software allows students to participate in adventure games or to design their own programs. Many programs allow students to participate in sophisticated simulations, construct new worlds, and experience historical events as virtual participants.

Another example of problem-solving software is *Clues in Crime: The Role of Forensic Science in Criminal Investigations* (Duke University). This multimedia introduction to forensic science includes video lessons, lab demonstrations, actual case files, and a true-to-life crime scene investigation that allows students to exercise their problem-solving abilities.

In addition to using professionally prepared multimedia products, high school students are creating their own sophisticated products using digital video cameras, scanners, and multimedia software such as *iMovie*, *Macromedia*, and *MovieWorks*. Content area literacy is being redefined by multimedia applications.

Some software programs are free and some are expensive: some are junk and some offer extraordinary opportunities for enhancing classroom learning.

Electronic books (eBooks) are a computerized alternative to traditional forms of printed text (Dobler, 2015). They include digital tools that support literacy in ways

not possible with traditional books— adjustable print size and touch screen dictionaries, for example. These electronic books can be downloaded immediately by customers and at lower prices than printed books. The Kindle, marketed by Amazon.com, is an eBook reader with a huge array of books or other documents, each of which can be downloaded from the Internet within seconds.

INTERNET

The *Internet* is a complex set of interlinking computer networks that began as a project in the U.S. Defense Department's Advanced Research Projects Agency (ARPA) as part of a military strategy in the United States to maintain communications in the event of a nuclear war. The network went operational in 1969 and was initially called the ARPANET. By 1984 there were 1,000 computers connected by the Internet. Today there are hundreds of millions of computers sending tens of billions of emails and doing tens of billions in business transactions on the Internet every day.

Speed, currency, and breadth of information are among the many attributes that make the Internet so dynamic. Email is rapidly replacing regular (snail) mail, and texting is rapidly replacing email for electronic social communications. Correspondence that formerly took three days takes three seconds, and it is now possible to send legal signatures via Internet. Another advantage of the Internet is its capacity for constant updating. As a reference source, the Internet is far more current than conventional paper documents such as textbooks or even newspapers. It also possesses extraordinary subject breadth, and hundreds of online libraries such as EB-SCOhost and ProQuest offer media centers and college libraries full-text, searchable databases of thousands of magazines, professional journals, books, and documents whose pages number in the billions. Websites are readily available to address almost every need and interest from buying airplane tickets to finding a local chess club. Some of the applications available on the Internet are nothing short of fantastic. For example, Google Earth (http://earth.google.com) combines satellite imagery with maps and the Google search engine to allow the viewer to search the entire surface of the Earth as though one were flying in from space to zero in on the Grand Canyon, the Eiffel Tower in Paris, or even the viewer's own home.

World Wide Web

A critical component of the Internet is the *World Wide Web* (WWW, or, simply, the Web), which was introduced in 1989. The Web is an extensive, continually expanding collection of interlinked documents, images, sounds, and other resources

that one accesses electronically through the Internet. The development of popular tools that enable people to design three-dimensional virtual environments on the Web, and to interact with content posted on the Web, has irreversibly altered the nature of the Web itself. Initially, single parties (e.g., businesses, agencies, individuals) used the Web to post information in digital form for other interested parties to access. The Web was the information superhighway. As users became intrigued with the technology and interested in participating themselves, the Web evolved into a massive platform of applications that enables people not only to share information, but also to interact with data posted by others.

Various web applications allow users to render their websites interactive, such that viewers may respond (typically in electronic text format) to what the author has expressed. This interactivity led to the development of broad-based social networks, groups of individuals who share a particular interest and interact with each other electronically. Early Internet-based social networks included electronic bulletin boards and network discussion groups. Advances in technology and the apparently unquenchable human need to congregate and communicate with each other have led to such popular multimedia social network sites, which allow more varied means of sharing and interacting. Most students now entering college have spent much of their lives interacting with others in this way.

Virtual Worlds

You are standing on a white beach at sunset looking at the rapidly changing play of red and purple light on the clouds in the distance. You can hear the waves and soft cries of gulls overhead. You lift your arms above your head and soar into the sky like Superman. You hover for a moment at a thousand feet, then fly across a verdant island to land in a magnificent tree house where some of your colleagues have already gathered. You communicate by voice in real time as the wind brushes through the trees and the stars begin to twinkle. You are avatars in a virtual world. The psychological projection is subtle, but you almost feel as though you are really there.

Cyber platforms known as *virtual worlds* offer an even higher level of interactive applications. Many different labels have been applied to virtual worlds, including collaborative virtual environments (CVEs), multi-user virtual environments (MUVEs), and massively multiplayer online games (MMOs). There are many different types of virtual worlds, but all share a fundamental characteristic: participants in virtual worlds interact with each other in the form of avatars—graphic representation of themselves, which, because the development of these platforms has been greatly influenced by the gaming industry, may be reality-based or fantastical—in specially designed internet-based simulated environments. Although the medium has historically been associated with online role-playing games for

adolescents and young adults (e.g., *World of Warcraft*), many virtual worlds have been designed to attract a broader audience. The technology has been adopted by a growing number of businesses to allow for greater interactions with potential customers, and by educators to enhance the learning experiences of their increasingly computer-savvy students.

Second Life

Second Life, which opened to the public in June 2003, is a robust, highly successful virtual world that is owned and operated by Linden Lab of Linden Research in San Francisco.

Second Life is comprised of thousands of islands (server space actually) owned or rented by people with avatars. Although basic membership in Second Life is free, as are many services and materials, a thriving economy exists inworld. Subscribers can open an account and purchase Linden Dollars (280 Lindens = 1 US dollar) for the purpose of buying such commodities as land (which may also be rented), structures, clothing, and scripted programs such as avatar animations. Much of Second Life has great educational value.

Cybraries

Cybrary, a blend of the words cyber and library, is a collection of websites accessible from a single site and dedicated to a specific subject area. For example, Remember. org is a cybrary of the Holocaust and shares powerful stories of survival through art, photography, painting, and remembrance (http://www.remember.org). Another example is Global Access to Educational Sources: A Cybrary for Middle School and Beyond (http://www.geocities.com/Athens/Academy/6617?200629). It is a comprehensive link to collections of websites for academic areas such as art, mathematics, and science. This cybrary also includes links to websites dedicated to internet resources, new and current events, reference sources, and teacher resources.

Other cybraries are huge compendiums of websites that have been evaluated by educators and deemed safe for student use. For example, Nettrekker (http://www. nettrekker.com) is a collection of 180,000 educator-selected websites, 600 periodicals, 3,000 domestic and international newspapers, and its own search engine. Nettrekker supports specific state standards by providing teachers with online resources, lesson plans, and student activities once the teacher has requested support for a particular standard. The Pennsylvania Department of Education has recently purchased access to Nettrekker for every public school student in the state.

Wikis and Blogs

Wiki is derived from the Hawaiian word for fast and refers to software that supports an open editing environment. This means that anyone can go to a wiki website and edit the text. A wiki is a quick way to collaboratively edit documents, and serves as a perpetual collective work of many authors. However, it also means that the validity of the information on the site is always in question because anyone can alter the content for any reason at any time. The most famous wiki is Wikipedia (http://en.wikipedia.org), a free online encyclopedia that boasts one and a half million pages of information. An internet search for a definition will frequently identify Wikipedia as a resource. The information may be interesting but should be digested with skepticism because the content may change at the whim of anyone who visits the site. Another example of a wiki is eBaywiki (http://ebay.about. com/od/ebaylifestyle/a/el_wiki.htm), a forum for eBay members to discuss best practices and strategies for buying and selling on eBay.

Blog is short for weblog and is similar in nature to a wiki except that the original material cannot be edited except by the individual who established the blog. Individuals respond to the material published on the blog and to each other. Blogs allow individuals to express their opinions and beliefs on any subject without necessarily identifying themselves. The first blogs began in 2001, and as of this writing there are more than 57 million. There is even a blog search engine called Technorati (http://www.technorati.com), which finds blogs on almost every subject. Adult bloggers are typically interested in information networking rather than self-expression. In contrast, teenage bloggers are primarily concerned with self-expression and social interactions. For instance, a typical profile in LiveJournal (http://www.livejournal.com), a teen blog, usually focuses on personal interests, lists of friends, and group memberships.

INSTRUCTIONAL PRACTICES USING THE INTERNET

WebQuests and Internet Workshops

WebQuest is an inquiry-oriented activity in which some or all of the information acquired from the activity comes directly from the student's interaction with the Internet. It is also an instructional paradigm for integrating the Internet into content area classrooms. The term *Internet Workshop* (Leu & Leu, 2000) is sometimes used when the purpose of the lesson is to teach students how to use the Internet (e.g., navigate, search, document information, avoid dangerous sites, and ask good questions). WebQuests are usually tied directly to the science, social studies,

or language arts curriculum. There is no one correct way to conduct WebQuests and Internet Workshops, but they usually have the following steps:

- **1.** Provide students with direct instruction in the use of internet search strategies and safety precautions.
- **2.** Locate an appropriate internet site and provide students with the URL (web address) or bookmark for location.
- 3. Create an activity that will require students to use the site.
- 4. Assign the activity allowing enough time for all students to access the site.
- 5. Encourage students to share their explorations, frustrations, and accomplishments during the workshop session.

An appropriate site is one that is well organized, well documented, and suitable to the age group. Activities may be simple, controlled tasks such as finding a single piece of information, or they may be complex and open-ended, depending on the age and technological sophistication of the students. The following are good websites for teachers interested in WebQuests:

- 1. Kathy Schrock's Guide for Educators http://school.discovery.com/schrockguide/webquest/webquest.html
- 2. The WebQuest Page at San Diego State University http://webquest.sdsu.edu
- 3. WebQuest News www.webquest.com
- New York Public Media (http://www.thirteen.org/edonline/concept2class/webquests/index.html).

Sample WebQuest for Grade 8 General Science

Froguts (http://www.froguts.com/flash_content/index.html) is a commercial website that offers schools virtual laboratory experiences. Visit the site and select "Demo."

A. Go to the link called "Froguts." This site will allow you to dissect animals using the computer. Select an animal; dissect it; and answer these questions:

What animal did you dissect? _



Circle the word that best describes how you felt about this activity:

interested disgusted bored excited

Name one advantage of digital dissections.

If you were given a real (dead) animal, do you think you could dissect it based on what you learned from Froguts? Why or why not?

B. Other "cool" science sites are available from the Science Learning Network (http:// www.sln.org). Go to the Science Learning Network and select a cool site. Name the site and be prepared to share three things about the site that make it cool.

Site Name:	e Name:				
Fact #1:					
Fact #2:					
Fact #3:					

Online Literature Circles

Literature circles are a collaborative approach to instruction that integrates the reading of a book with discussions of themes and related background information. Small groups of students at any grade level work together, and each individual selects an aspect of the book for which he or she will provide leadership in research and discussion. For example, if a class were reading *The Diary of Anne Frank*, members of a literature circle might select topics such as World War II, the Holocaust, the history of Warsaw, or ethnic prejudice. These topics would be researched on the Internet with appropriate guidance from the teacher.

The Dark Side of the Net

- **Dad:** Son, what did you learn in your first year of college?
- **Son:** Well, Dad, I learned that the only substance you can eat or drink in unlimited quantities without dying from it is water.
- Dad: That's interesting, what else?
- **Son:** I learned how to make a fertilizer bomb using the Internet.



As enthusiastic as we are about the Internet and the general use of technology to enhance education, we would be remiss if we failed to mention the downside of technology. The Internet is the Wild West of communications. Laws that were designed to protect children, copyrights, and personal privacy are different or entirely inapplicable to the Internet. In addition to good information, the Internet carries enormous amounts of bad information and outright danger. The intellectual scum of society are online and prepared to turn the information superhighway into an alleyway for predatory sex, business scams, misinformation, and pathologic mayhem. (What purpose is served by the creation of computer viruses?) You can buy illegal drugs and child pornography on the Internet just as easily as sporting goods equipment or antiques; we all seem doomed to receive ridiculous amounts of *spam*, internet junk mail from the bottom feeders of cyberspace. We are all getting tired of opening our email accounts only to find dozens of brazen titles such as, MAKE MONEY FAST, CHEAP DRUGS, and NEW ADULT WEBSITE WITH HOT LINKS. For these reasons and many more it is vital that students ask good questions whenever they view a website:

- o Do the authors of the website identify themselves? What are their credentials?
- o Why should I believe the information on this website?
- o Are the authors informing me for my benefit, or are they biased?
- o Is the website trying to sell me something or change my beliefs?
- o Do the authors of the website want information from me, and should I provide it?
- o Is there any potential danger to me or to others from the website?

Cyberbullying

In yet another aspect of the Internet, cyberbullying has invaded homes and schools with dire consequences for the psychosocial well-being of students (Jacobs, 2010). While First Amendment rights apply to the Internet, not all entries are protected, nor should they be. For example, the following categories of discourse do not enjoy free speech protection:

- o Lewd and obscene speech
- o Speech that is profane



- o Libelous speech
- o Insulting or fighting words that intend to injure or incite

Another form of cyberbullying refers to being "publicly shamed" on the Internet (Ronson, 2015). The only entity benefitting from this practice, especially if the shaming goes viral, are search engines that glean extra advertising power from this dark side of the internet posts.

Schools and local law enforcement generally take cyberbullying and public shaming very seriously and practice zero tolerance to create a safe and sane learning environment.

Additional information on internet safety is available through iSafe (http://www. isafe.org), a nonprofit foundation dedicated to protecting the online experiences of youth everywhere. Online protection practices are also available from the American Library Association's *The Librarians' Guide to Great Websites for Kids* (http://www.ala.org/ala/pio/availablepiomat/librariansguide.htm).

Thoughtful, critical literacy has never been more important, and no other technological or intellectual tool will serve the young Internet reader as much as the right question asked at the right time in the right way.

CONCLUSIONS

We believe that the promise of technology is real but also that it will not be realized until there is a universal commitment to integrate technology into the curriculum (Williamson, 2013). In addition, the curriculum in most schools is driven by textbooks in print or online form, which are frequently misused to ensure that all students are exposed to the same content and progress through the curriculum at the same pace. Contrast this with the individualistic nature of cyber exploration and blogging. Perhaps the time has come for our profession to question the necessity of all students acquiring the same knowledge base. This might require tossing out the textbooks—or at least making them supplemental—and elevating the Internet, interactive multimedia programs, and original source documents as the primary tools for learning in schools of the future. It might also mean taking creativity and problem-based learning in schools seriously, engaging students in civic action projects and efforts to solve environmental issues like local water quality (Bean & Dunkerly-Bean, 2016).



Teachers in content areas need to understand the value of integrating the Internet, multimedia software, and electronic databases into their respective subject areas. Problem solving and the multidimensional exploration of art, history, literature, mathematics, music, and the physical sciences are all possible through multimedia software. What are the advantages of such systems? How will they change the process of learning? Will they significantly affect the traditional role of the teacher? These are just a few of the important questions teachers like you will need to address in the near future.

Computer instruction, when combined with video and text sources, promises to be an exciting technological and educational innovation. New methods of presenting traditional information, new methods of problem solving, new ways of organizing and structuring large databases, and new ways of providing personalized instruction are just a few of the opportunities available. Schools must provide students at all levels access to the new technology and ensure equal access to resources whatever their socioeconomic background, race, or gender. At the same time, we must make sure that the new technologies do not limit or impede our capacity to be humane and critical interpreters of the world in which we live and work.



REACTION GUIDE

MINI PROJECTS

		Confirmed	Disconfirmed
1.	Technology has had a greater impact on social networking than on school achievement.		
2.	It is impossible to make the Internet safe for children.		
3.	Computers and the Internet have replaced textbooks as the dominant instructional tools in public education.		
4.	The computer is morally neutral.		
5.	Virtual worlds and avatars are a passing fad.		
1. 2. 3. 4. 5.	A B Why my choice is confirmed.	not confirmed.	

- This chapter contrasts current societal expectations for computers and related technology with the failed expectations of the teaching machines of the 1950s and 1960s. Read the article, *The Automatization of Socrates*, by Desmond Cook on the website. Were the purposes of the old teaching machines the same as today's educational technology? Do you believe that today's computers and software will succeed where the machines of 40 years ago failed? Why or why not?
- 2. Discuss the advantages and disadvantages of a multimedia encyclopedia over a traditional printed one.
- 3. Compare and contrast the ENIAC with modern computers that have multimedia capabilities.
- 4. Explain how the computer revolution might contribute to the social evils of gender bias, stereotyping, and physical violence.
- 5. American educators have in large part embraced the notion that the use of computers in schools is inevitable and even desirable. In many respects, the increasingly widespread use of computers in our culture and schools parallels the introduction of the automobile at the beginning of the previous century. Although the automobile made rapid and convenient travel possible, it also engendered highway construction, air pollution, and frequent accidental deaths. Both from a personal and an educational point of view, what might be some of the hidden costs of introducing computers into our schools? Can these problems be avoided, or are they inevitable?

RECOMMENDED WEBSITES

Teaching for Creativity

- o TEDed: http://ed.ted.com
- o Teaching Channel: https//teachingchannel.org
- o Quicktime: http://quicktime-download.org (Make your own instructional videos; upload to YouTube)
- o Blendspace: http://blendspace.com (One of our favorites for lesson development with video clips)

WEBSITE ACTIVITY

Go to the website for Chapter 5 activities.





