

Current Events and Technology: Video and Audio on the Internet

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As science teachers, we often use current events to enhance our teaching (Anderson 1995; Hanna 1998). We ask students to bring in articles of interest for discussion and posting on bulletin boards, and we refer to a news item as a way of emphasizing the dynamic nature of science. The *National Science Education Standards* encourage teachers to facilitate dialogue regarding the nature of science, while at the same time guiding students in connecting their personal experiences with social perspectives of science (NRC 1996). Science current events provide a rich and engaging means of achieving these standards.

Assume that you are watching the nightly news on television and you see a segment that you'd like to share with your class. How do you do this? You could verbally describe the segment or bring in a written article from the newspaper on the same topic, but these approaches will lack the images, sounds, and descriptions that made the television piece engaging. The goal of using a current event is to show the relevance of class topics in the real world; this is best accomplished when the event is of interest to students and connects with them at an emotional level.

While reading about an event may have greater educational benefit than viewing it on television, the television segment will better engage student interest. For example, in November 2001, Hurricane Michelle ravaged the

Caribbean, causing several deaths and millions of dollars in damage. The true ferocity of such a hurricane cannot be effectively conveyed by the written word. A television segment, however, allows students to see how 350 km/h winds affect structures, view the storm's devastation with their own eyes, and see the faces and hear the words of those affected by the storm.

Another example, presented recently on CNN's website, describes efforts to combat the spread of polio across the Afghanistan-Pakistan border. A segment such as this might be used when teaching about human health and diseases. The topic of polio is more relevant to American students when they are able to see children in other countries battling the disease. In both the Hurricane Michelle and polio examples, the video clips bring science news events to life for the students.

Some teachers already use pieces from the nightly news in their science classes. They videotape the news from their favorite network, view it, cue the videotape to the desired story, bring it to school, play it in their class, return the tape home, and repeat the process each day.

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While this is effective, it is extremely time-consuming and limits the available news pieces to only one network news broadcast. Luckily, more efficient means of consistently integrating science-related current events into your teaching are available over the Internet.

Streaming video

Some teachers are unaware that major television news organizations maintain websites with digitized clips of news pieces from their broadcasts. The clips can be accessed over the Internet and played through an Internet browser with computer technology commonly found in a middle-school classroom. This enables teachers to utilize these online resources immediately, without investing in additional computer hardware or software.

Accessing news clips in this manner is far superior to videotaping. It takes significantly less time to browse the available clips on websites than to carry out the lengthy procedures required in daily videotaping. It also allows teachers access to news pieces from all of the major news

organizations—not just the one that you chose to videotape. The news clips are usually only a few minutes in length and often are indexed under categories such as “Science and Technology” and “Health.” Thus, on any given day, you could check on current event news items and consider the possibilities for immediate integration into your lesson plans. Periodically, a news item will come along that provides a close fit with the curriculum already in place in your classroom. You can show the news piece to the entire class if you have computer projection capability, or students can view the segments individually, or in small groups, at the computer. Whether viewed as a group or individually, the process of guiding students to understand the science news piece holds much potential for conveying the social implications of science.

Technology requirements

There are several requirements for successfully viewing streaming video clips from news sites in your classroom. First, you need the appropriate Internet browser plug-ins (see Figure 1). The vast

majority of news sites utilize the popular (and free) RealPlayer or QuickTime plug-in to display video, so you will need to download and install them if they are not already on your system. The addresses of the download sites are given in Figure 1.

Second, because the streaming video clips play in a rather small computer window that is not easily viewed from a distance, you need computer projection capability if you wish to show a clip to the class as a whole. Third, you need a set of computer speakers to hear the audio of the news piece. Fourth, it is advisable to have a relatively high-speed Internet connection. At slow connection speeds (56K and lower), the audio is crisp and clear but the video becomes pixilated, choppy, and difficult to follow. The quality of the video is very good with faster Internet connections, but even with a lot of bandwidth there can still be occasional interruptions in playback.

Online video clips are certainly engaging, but they also are limited to one day's events. At the present, the major news websites do not maintain archives of video clips. Most clips are available for only one day and are replaced by clips from the next night's broadcast. Only a small number of clips on general topics are maintained for a longer period of time—this unfortunately prevents teachers from making these clips a permanent part of their lesson plans. Because the video is streamed, it cannot be downloaded and saved for future use. Further, the major news websites do not maintain archives of their video clips.

Due to the unpredictable nature of current events, using clips in the classroom requires some deviation from a textbook-based lesson plan. However, most teachers certainly would agree that the true nature of science falls far beyond such lesson plans, and the inclusion of current events can be of great benefit. As you view the science news video clips available on different days and consider a means of use appropriate in your teaching situation, you will find them to be engaging teaching tools for your students. It will also catalyze your creative energies as an educator, for helping students

FIGURE 1 Required technology

Online news video clips

- RealPlayer 8 Basic (www.real.com/player)—select link to free RealPlayer 8 Basic player.
- QuickTime 5 (www.apple.com/quicktime/download)
- Computer projection capability (if desired)
- Computer speakers
- Internet connection (relatively fast)

Online audio clips

- RealPlayer 8 Basic (see URL above)
- Computer speakers
- Internet connection (any speed)

understand such highly textured information requires a teaching approach that is open to multiple perspectives.

Streaming audio on the Internet

In an ideal world, every middle-school classroom would be equipped with the most up to date technology, such as a computer projector, and high-speed Internet access. Obviously, this isn't always the case. Some classrooms have outdated computers, no ability to project the computer screen, or slow Internet connections. In these instances, streaming video clips are impractical.

Luckily, there is another method available for integrating current events into your classroom that does not require computer projection or high-speed access. National Public Radio (NPR) maintains a website (www.npr.org), similar to those of the major news organizations, through which teachers can access digitized audio clips from their many programs. These clips also play with the RealPlayer plug-in, but require very little bandwidth, so they can be used effectively with even the slowest Internet connections.

While lacking the visual appeal of digitized video, professionally produced radio programs still provide the means to connect students with current events. Unlike video, digitized audio clips do not need to be projected, so you can present them to an entire class using only one set of

computer speakers. The NPR website has an additional feature not found on the broadcast news sites—a keyword searchable archive of audio clips extending back several years. This feature enables teachers to locate audio clips on a wide variety of topics, not only those currently in the news.

NPR also has paired with Bigchalk.com, The Educational Network (www.bigchalk.com) to create “Classroom Radio,” a resource specifically designed for the K–12 classroom. This site links NPR audio clips with student activities and discussion questions, providing teachers with ready-to-use lessons around major themes and core subjects such as health and science.

Additional audio clips on environmental topics can be found on the website for the NPR program, *Living On Earth* (www.loe.org). The site provides current content from the weekly program and maintains an archive of past programs extending back nearly ten years. The older pieces are available only in transcript form, but newer clips (1999–present) are presented in both streaming audio and mp3 format. The mp3 clips (a common format for distributing music over the Internet) can be downloaded to your computer and stored for later use. This is particularly useful for classrooms with slow Internet connections, as you can download audio clips from the website at a convenient time (during planning period, before or after school) and then play them during class directly from the computer’s hard drive. This eliminates the need for an active Internet connection during class and allows you to store clips on the computer for future use.

It would be prohibitively long to provide tutorials for each of the websites in this article, so we have opted instead to give you this information over the Internet at science.kennesaw.edu/~mlaposat/educproj. This website allows you to access printable tutorials that describe in detail how to locate and play video and audio clips from the websites mentioned in this article. The tutorials provide step-by-step directions using images from the websites, enabling even novice users to quickly learn how to utilize these online resources.

As a final thought, please consider why the middle grades might be a particularly fertile ground for frequent integration of current events. A recent synthesis of recommendations for improving the education of early adolescents asserts that the “subject matter of the core program should be linked directly to young adolescents and how they fit into the world about them and should be appropriate to the developmental characteristics of young adolescents” (Hurd 2000). From a K–12 view, the middle school years represent the time when students have emerged from the self-containment characteristic of elementary grades and are taught in a learning community that is less departmentalized than the high school grades. Because interdisciplinary teaching tends to be done particularly well by middle school educators, and also because this is the developmental period when adolescents are beginning to think more abstractly and handle more variables in their learning, current events fit well as a tool to promote meaningful learning. We hope that accessing science news through the Internet helps you to make more efficient and frequent use of current events in your science teaching.

References

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- Hanna, N. R. 1998. Newsworthy research. *The Science Teacher* 65(3): 50–52.
- Hurd, P.D. 2000. *Transforming middle school science education*. New York, N.Y.: Teachers College Press.
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Internet resources

- ABC News: www.abcnews.go.com
- CBS News: www.cbsnews.com
- CNN: www.cnn.com
- Classroom Radio: www.bigchalk.com (choose “Classroom Radio” from main page)
- Fox News: www.foxnews.com
- *Living on Earth*: www.loe.org
- NBC News: www.msnbc.com
- National Public Radio: www.npr.org
- Online video/audio tutorials: science.kennesaw.edu/~mlaposat/educproj