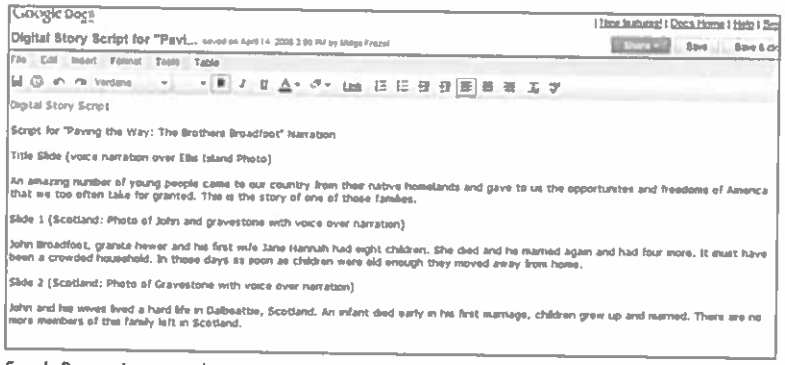
Google Docs

There are many new online word processing tools. Google Docs, for example, is a free suite of word processing, spreadsheet, and presentation applications designed for collaboration. Because the resulting work is stored online, students can access their work from any location—school, library, or home. A Google account is required, but it is a no-cost alternative to students using different word processing software applications and having to e-mail their scripts to each other. Because Google Docs also has a presentation tool, students can use that as a stored collaborative space simulating a storyboard tool.

Google Docs also provides the Google Gears plug-in, a way for users to work on their documents stored by Google Docs even when they are offline. This is great news for those teachers who have students working on digital stories where access to the Internet is not always available.


Digital Story Script for "Pavi...

Digital Story Script

Script for "Paving the Way: The Brothers Broadfoot" Narration

Title Slide (voice narration over Ellis Island Photo)

An amazing number of young people came to our country from their native homelands and gave to us the opportunities and freedoms of America that we too often take for granted. This is the story of one of those families.

Slide 1 (Scotland: Photo of John and gravestone with voice over narration)

John Broadfoot, granite hewer and his first wife Jane Hannah had eight children. She died and he married again and had four more. It must have been a crowded household. In those days as soon as children were old enough they moved away from home.

Slide 2 (Scotland: Photo of Gravestone with voice over narration)

John and his wives lived a hard life in Dalbeattie, Scotland. An infant died early in his first marriage, children grew up and married. There are no more members of the family left in Scotland.

Google Docs script screenshot

Google Tools for Digital Storytelling

Google Docs

http://docs.google.com

Account Sign-up: www.google.com/accounts/NewAccount

Google for Educators: www.google.com/educators

Help Page: http://docs.google.com/support

Google Docs is a free suite of online word processing, spreadsheet, and presentation applications that can be used to create individual or collaborative documents, spreadsheets, and presentations with as many features as most desktop applications. These created products can be downloaded to your computer to be used offline, or stored and shared with others online. To use them, all you have to do is sign up for a free Google account, and you can access the suite, the instructions, a video tutorial, and a special online section with shared ideas for educators.

Google Gears

http://gears.google.com

Help Page: http://tinyurl.com/5mjm4u

If you want to work with the products you create with Google Docs when you're not online, you will be prompted to install a small plug-in, called Google Gears. It is easy and free. Just follow the directions contained on the Google Docs Help page.

Google Notebook

http://google.com/notebook

Notebook Tour: www.google.com/googlenotebook/tour1.html

Google Notebook is an online tool designed to gather and store information from web pages. These items can be snippets of text,

images, links (URLs), and text that you will want to type in and save. It is meant to simulate a physical notebook with a pocket for storing items. Teachers and students can use this handy tool privately or as a shared resource for group projects such as digital storytelling.

Google Image Search

http://images.google.com

Google Image Search service is a way to locate images stored on web pages quickly by performing a keyword search. It should be noted that copyright rules apply to using these photographs and images no matter where they are located. Students should be instructed to look for the owner of the image and to find a way to contact them if permission is needed.

Google Maps

http://maps.google.com

Google Maps mapping service is an online tool for displaying maps of locations near and far. Place-based digital stories rely on the use of maps so that students can relate the visual map with the locations in the story. Ever improving, Google Maps is a wonderful and useful classroom tool. All stories, real or imagined, have locations to be explored, and this can help students develop essential geography skills.

Shared Media Resources

Many resources for multimedia are available under Creative Commons licenses, discussed in Chapter 1. Some are in the public domain or are offered under an open content license, meaning that they are freely available for use in student projects.

Educators, too, are taking photographs, making music and sounds, and applying the least restrictive Creative Commons license to their work so that others can use it legally. This way, if one teacher takes a photograph of an outdoor public monument, the photo can be shared with other educators whose students are writing digital stories about that monument and never had the opportunity to visit it in person. The most commonly used repository is hosted by Tech4Learning and is called Pics4Learning (www.pics4learning.com). Photographs are grouped by subject. If you don't find what you're looking for, you can search the collection. Information is also provided at Pics4Learning to assist students with citation.

In contrast, morgueFile's repository of high-resolution photographs (http://morguefile.com) can be searched by keyword, but each search result should be examined carefully for appropriate school use and for copyright information. This is also true for images in Google's Image Search (http://images.google.com). If a student finds a photograph they'd like to use for their project, they must seek permission (by e-mail) from the person who owns it.

Recently, The Library of Congress and Flickr have teamed up to host photographs that have "no known copyright restrictions." This growing endeavor, called The Commons, (www.flickr.com/commons/) is an example of collaboration to make it easier to view historical photographs. Other museums and repositories of photographs with no restrictions on them may follow. This is great news for digital storytellers whose projects revolve around history and culture.

The Commons—Historical Photo Archive

An exciting development for teachers, students, historians, archivists, librarians, and other digital denizens is the recent partnership formed between the Library of Congress and Flickr. The result is a giant collection of historical photos with "no known copyright restrictions." The partnership was launched as a pilot project in January of 2008 with a collection of about 1,500 photos selected from over a million photos from the Library of Congress. This archive is known as The Commons (www.flickr.com/commons/).

Sample Commons photograph

Users can tag photos freely, and they can also contribute photos. Although the collection is still growing, this brilliant idea has caught on like wildfire. People spend hours examining, commenting on, and tagging photos for use in all kinds of projects. If you visit their site you'll see that today there are as many as 20 million tags on this Flickr site.

Also, take a look at the cultural artifacts (moving images, live music archives, and audio) at the Internet Archive (www.archive.org) to find project-appropriate resources. This site also offers a search forum bulletin board on the front page, with date and time of the post.

The Open Video Project (www.open-video.org) holds only video clips, but is likewise education-friendly. This site is sponsored by the University of North Carolina. The listings, organized by genre, provide length, color, and sound details.

Podcasting and Audio Files

Podcasting is a way to share and receive audio broadcasts through the Internet. Using digital media files, podcasts can be an effective way to tell digital stories. Sound clips and short musical clips are being created and posted via podcasts on websites with the expressed intent of sharing the material with students. Use caution with any of these sites because the word "free" is beginning to mean different things to different people. Check also for rights to educational use.

Freeplay Music has an excellent libary of clips of music in different lengths, perfect for digital storytelling, but these clips may not be broadcast. You may not post them to the web as part of your project or in podcasts—as many educators once thought—even in abbreviated format, but they are great for in-classroom projects.

Educators may also be interested in two music and sound clip sites that contain content licensed under Creative Commons. ccMixter (http://ccmixter.org) is a community music site

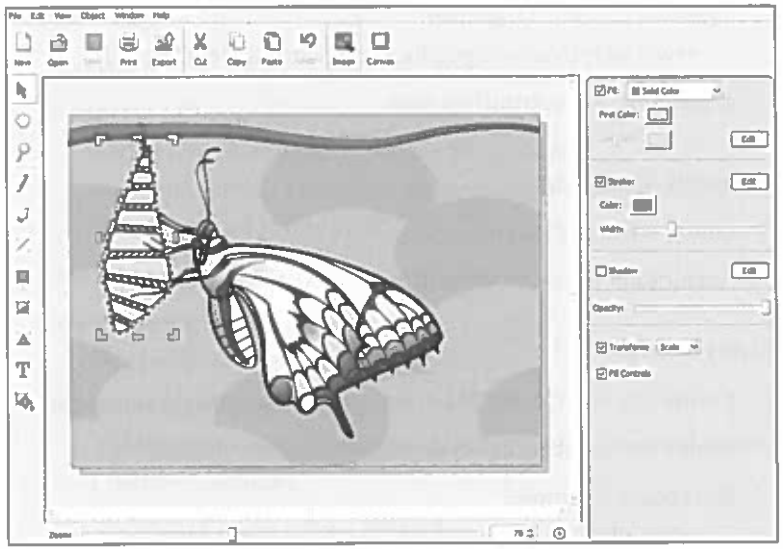
featuring music remixes licensed under Creative Commons. The Freesound Project (www.freesound.org) is a collaborative database of Creative Commons licensed sounds (not music) for use in audio tracks and podcasts.

Additional sites are listed in the Resources section at the end of this chapter.

Illustration Tool

Tech4 Learning, a popular educational software company, created Twist (www.tech4learning.com/twist/), an affordable vector-based illustration tool to be used in Grades 3–12 to create scientific diagrams and other drawings for digital stories that have their curriculum connection to science and technology. Students can design images that can be easily exported to common graphic formats, then easily inserted into other applications to create the story's technology connection.

A quick look at the company's website will demonstrate the flexibility of this application. Twist sample files can be downloaded and opened in this application as a start for digital storytelling projects. Younger students in Grades 3–5 can create a single image to be placed in the digital story as part of a project or to be used as a story starter to open the conversation between teacher and student within a curriculum area. In addition, educators around the world have freely donated images and photographs that can be used as starters for the background of Twist illustrations.



Example of Twist project screen

Resources

Timelines

Chronological Timeline: www.teachervision.fen.com/graphic-organizers/printable/6301.html

Dipity: www.dipity.com

ReadWriteThink Interactive Timeline: www.readwritethink.org/materials/timeline

Timeline Generator: www.teach-nology.com/web_tools/materials/timelines

Timeline Graphic Organizer:
www.eduplace.com/graphicorganizer/pdf/timeline.pdf

XTimeline: www.xtimeline.com

Concept Mapping

Gliffy: www.gliffy.com

Inspiration software: www.inspiration.com

Storyboards

Comic Life and Comic Touch software: http://plasq.com/products

Print Free Storyboards: www.pdfpad.com/storyboards

Storyboard Example:
www.sdcoe.k12.ca.us/SCORE/actbank/tboard.htm

Storyboard Planning PowerPoint Template:
www.alice.org/bvw03/TAweb/storyboard_template.ppt

StoryBoard Pro Software:
http://movies.atomiclearning.com/k12/storyboardpro

StoryBoard Pro free tutorials:
http://movies.atomiclearning.com/k12/storytellingindex.shtml

Storyboarding: A Recipe:
www.storycenter.org/memvoice/pages/tutorial_3.html

Shared Resources for Image and Video

Pics4Learning: www.pics4learning.com

morgueFile: http://morguefile.com

Google Image Search: http://images.google.com

The Commons: www.flickr.com/commons

Internet Archive: www.archive.org

The Open Video Project: www.open-video.org

Audio Clips

PodSafe Audio: www.podsafeaudio.com

Partners in Rhyme: Free Sound Effects:
www.partnersinrhyme.com/pir/PIRsfx.shtml.
Note that many sound effects are royalty free rather than free—a license fee must still be paid.

Freeplay Music: www.freeplaymusic.com

Musopen: www.musopen.com
Free public domain classical music.

ccMixter: http://ccmixter.org
A community music site featuring music remixes licensed under Creative Commons.

The Freesound Project: http://www.freesound.org
A collaborative database of Creative Commons licensed sounds.

Learning in Hand

On his Learning in Hand website (http://learninginhand.com), education consultant Tony Vincent offers a workshop for educators and posts his resources for moviemaking. You will find Tony's handouts, storyboard page, and online presentation useful for other video-based projects in addition to his ideas for storytelling.

Tony Vincent's movie-making resources web page

Terrific for computer users on all platforms, Tony's handouts are a valuable resource. He offers experience in the classroom and has taught his own students good video and still camera techniques, no matter what level of camera experience they may have had.

Photo Story and Movie Maker

Not to be outdone by Apple's successful desktop video-editing application, Microsoft offers Photo Story and Movie Maker, two free tools for digital storytelling that are already installed on computers running Windows XP or Windows Vista. If you find they are not installed, both are freely available from Microsoft's website for quick download. Photo Story can be found at www.microsoft.com/windowsxp/using/digitalphotography/photostory/ and Movie Maker at www.microsoft.com/windowsxp/downloads/updates/moviemaker2.mspx.

The primary difference between Photo Story and Movie Maker is that Photo Story does not allow importation of video clips. But, you can make a digital story in Photo Story, render it to movie format, and import it into Movie Maker. You can add digital story elements either before or after this imported movie. Of course, you can use either product to complete your digital story.

Photo Story

Photo Story shines as a digital storytelling application, in part because it creates video from still digital images. It is also a favorite choice of educators for ePortfolio creation because, for example, they can use scanned or digital photographs taken of paper projects and then import the photos into Photo Story.

Another advantage of Photo Story is that you can attach a microphone to your desktop computer or laptop and easily record and store short narration. Photo Story also offers copyright-free music in many styles, which is easily applied to your project for a nice effect. For busy teachers who don't have

the classroom time to record and edit small narrations, or to hunt for just the right noncopyrighted music, Photo Story is a great resource.

Following is a tutorial that will introduce you to the capabilities of Photo Story.

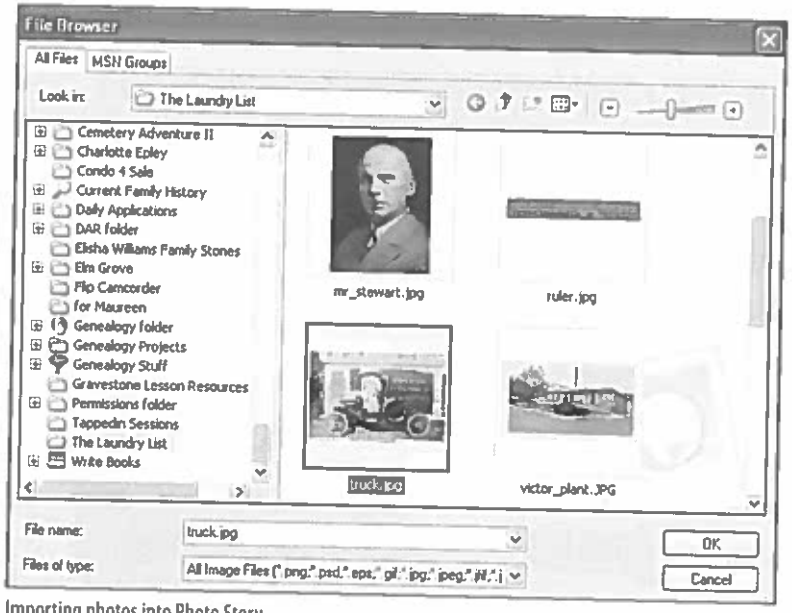
Photo Story Tutorial

Imagine that your students are working with the local Chamber of Commerce to produce a print and online project with a focus on family-owned businesses. As part of this, your students must produce a digital story about the history of each business, demonstrating to a community audience how each business has evolved over time. Your students have scanned old photographs and brochures, enhanced the resulting images, and conducted and recorded oral interviews from people in the community who worked for and lived near the business. They have developed a timeline and created a simple storyboard as a first step in the production process. After completion of this part of the project, students will take photographs of the business as it exist today, and then use Photo Story to blend together the history, the oral interviews, and the pictures of the current business into a single production. The resulting digital story will show changes in perspectives over time. This project, by the way, meets national and state standards in history. At the same time, it helps students connect to their own community.

In the tutorial that follows, screenshots and instructions are for Photo Story 3. Both older and yet-to-be-released versions will differ somewhat, but should maintain the same basic functionality.

Importing photos for the project

1. Students place scanned and edited photos and documents into a folder titled with the name of the project.
2. Students open Photo Story, and at the first on-screen choice select Begin a New Story.
3. Students then click the Next button.
4. The next screen, called the "Import and arrange your pictures" screen, asks students to Import Pictures.
5. When students click on the Import Pictures button, the file browser opens, allowing them to import one, some, or all of the photos into the folder.



Importing photos into Photo Story

Arranging and editing photos

6. Next, students bring the still images into a timeline, where they can be easily rearranged by dragging or be deleted. Photo Story provides tools for simple editing techniques. Go to the Edit menu or find other tools located directly underneath each image.

7. Students may need assistance in order to understand the process of removing black borders.

8. At this point, it is critical that students name and save the project. This is not the same as rendering a movie, as that comes later in the process.

   The buttons at the bottom of each screen allow projects to be saved frequently, and also permit students to return to a previous screen if needed.

Arranging photos in Photo Story

Adding titles and effects to photos

9. The "Add a title to your pictures" screen provides text overlay on any image and, as shown in the following figure, allows students to add a small amount of text to any slide, especially to a first or title slide. An important note for teachers: there is no spelling checker in this application, so all text should be checked manually.

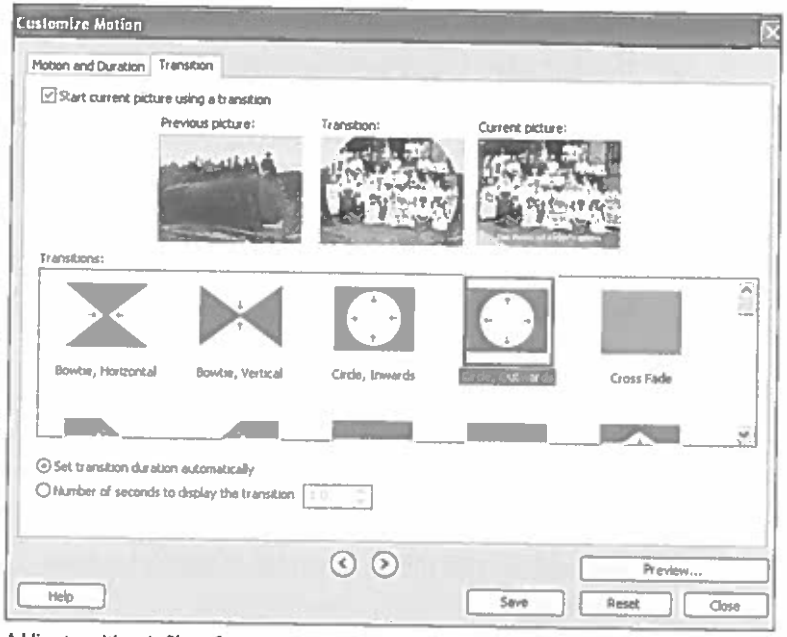
10. Familiarize your students with the Customize Motion options Motion and Duration, and Transition.

11. Have students learn how to lengthen the time each slide is displayed on screen (at least 7 seconds is needed). They can also control the Ken Burns Effect of panning and zooming.

12. Students can click the Transition tab to apply or remove transitions and to select a transition type.

13. Teachers, be sure to work with all of these tools beforehand to decide how students can best take advantage of all the special effects.

Adding text to a slide in Photo Story



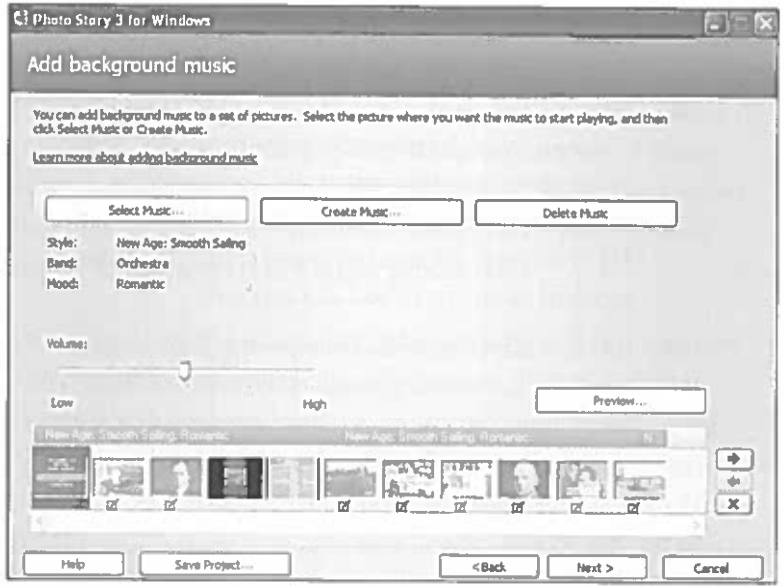
Adding transitions in Photo Story

Adding narration and other sound

14. At this point in the program, students will have the option of adding narration. (They will need a microphone to record the narration.)

15. Background music can be applied and previewed at the next screen. The Create Music button is for applying the wide variety of prepackaged music. The volume of the music can be adjusted here.

    Digital stories that incorporate special effects, music, and narration will naturally take students longer to produce.



Adding music in Photo Story

Creating the project video

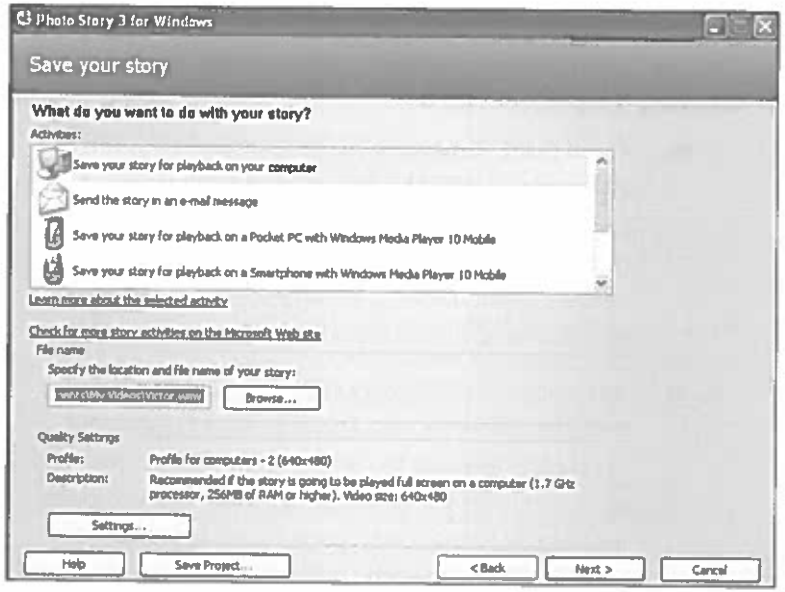
16. At this point, students should stop and save their story as a project (a WP3 file), prior to creating the video. If they skip this step, they can't return to make changes, corrections, or adjustments. So, insist on this saving step before students move to the final screen! Students will probably need mentoring during this process.

17. Rendering the digital story into a movie format is the final step. Before they do, students should read about the choices available by clicking on the link "Learn more about the selected choices," which quickly opens the Help file to the correct page. Please note that as students click on each choice of how to save the

movie file, an explanation of its technical requirements appears.

18. Most of the time, students save their movie using the "Save your story for playback on the computer" option. When specifying the location and filename of the story, saving movies to the My Videos folder within the My Documents folder is the logical choice and helps students locate the project at a later time.

19. When students are ready to render the project into a movie file format, they should click the Next button. This process can take some time depending on the file's size, so plan accordingly. It is not something that can be accomplished in the few seconds before the end of a class period.



Saving story to movie format in Photo Story

Movie Maker

Movie Maker from Microsoft is a more complex application than Photo Story, but after you have created your first digital story—including the ePortfolio or photo essay variations—in Photo Story you will be ready to work with Movie Maker. Remember that movies rendered with Photo Story can be inserted into Movie Maker as part of a larger production.

Like iMovie on the Macintosh, Movie Maker is a full-featured video-editing and production application. This means that students will have many more options for manipulating and controlling the content. Although this can further empower many students, the extra complexity can get in the way of others. Additionally, video is much more demanding of computer resources than still images. You'll want to set aside more time for students to experiment with the application, but you'll also need to ensure you have ample storage space for the video and working files.

Movie Maker Tutorial

Imagine that your students are involved in learning about the pilgrims who traveled to America seeking religious freedom in a new world. One of the goals of your month-long classroom unit is for students to understand what hardships, fears, and emotions these travelers faced in their journey of survival.

As part of this, your students must create a virtual fieldtrip to modern day Plymouth, Massachusetts, connecting the past with the present for a better understanding of history.

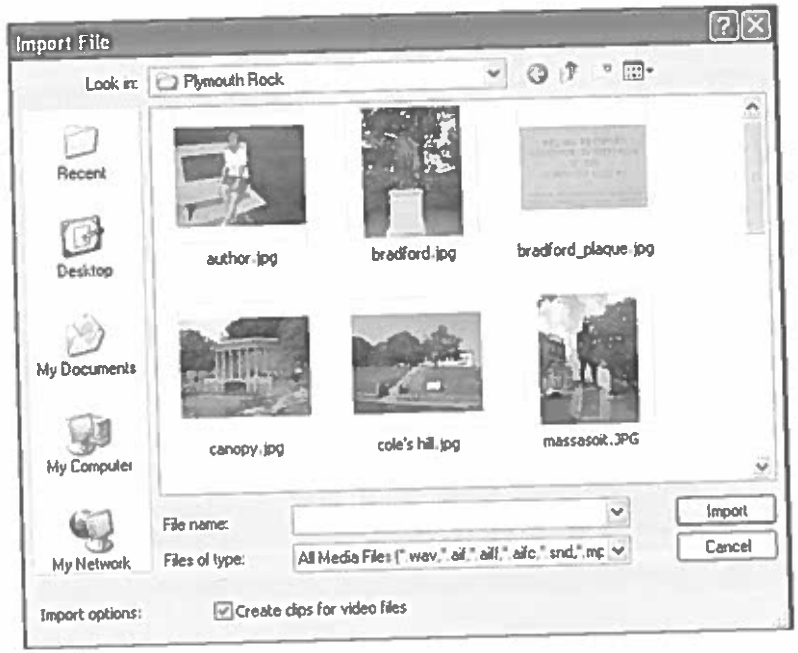
For the preparation stage, students consider how the telling and retelling of these stories has created legends, mistruths, and modern-day controversies.

Students investigate the "That's Plymouth Rock?" WebQuest for background material (www.midgefrazel.net/wqprock.html) then develop a timeline and create a story board as part of the production process.

In the steps that follow, screenshots and instructions for Movie Maker are for version 2. The older and yet-to-be-released versions will differ, but should maintain the same basic functionality.

Importing photos for the project

1. Students gather needed media elements to create their digital story and place them into a folder titled with the name of the project.
2. Students open Movie Maker 2. From the File menu, they choose Import into Collections.
3. Students use the Import File dialog box that appears to navigate to the location of the student folder.



Importing photos into Movie Maker

4. Students choose the files they are going to use, and then click Import.
5. Once their files appear in their project, students save and name their project by pulling down the File menu and choosing "Save Project as…."
6. The Collection panel in the center of the screen holds the media elements for the movie project. These elements can be added to the timeline at the bottom of the screen by using drag and drop. Students can add more media elements to this panel by using the same method of importing them into their collection.
7. At this point, saving the project again is essential.

Example Timeline view in Movie Maker

Arranging and editing photos

8. The timeline at the lower part of the screen is the heart of the process of creating the movie. Students drag and drop the elements (photos, sound clips, and music) from their Collection panel into the timeline area. Media items can be rearranged by dragging.

9. Each visual element can be viewed by clicking on it to have it appear in the Monitor pane. Students can also view the movie using the Play button in this Monitor pane.

10. The bar in the timeline will move, showing where students currently are in the viewing of the movie.

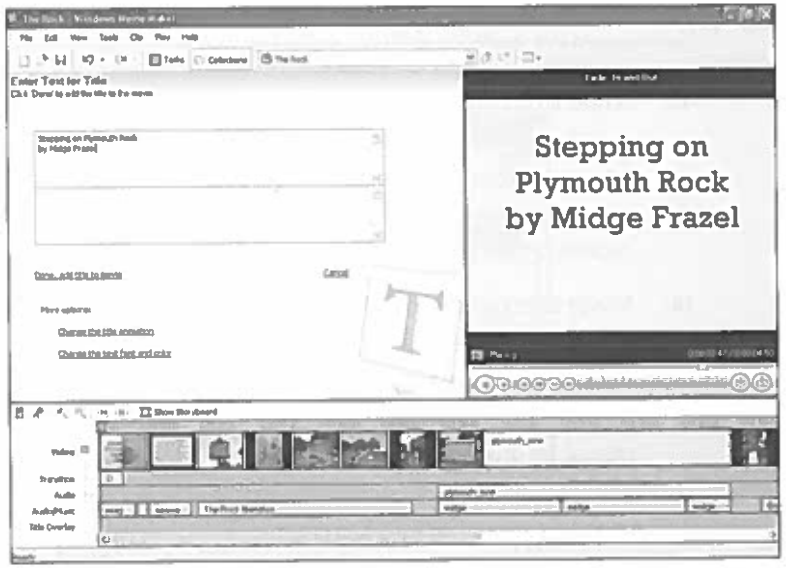
Adding titles and effects to photos

11. Text slides can be placed at any point in a story. Each movie should include at least a title slide and a slide for credits at the end.

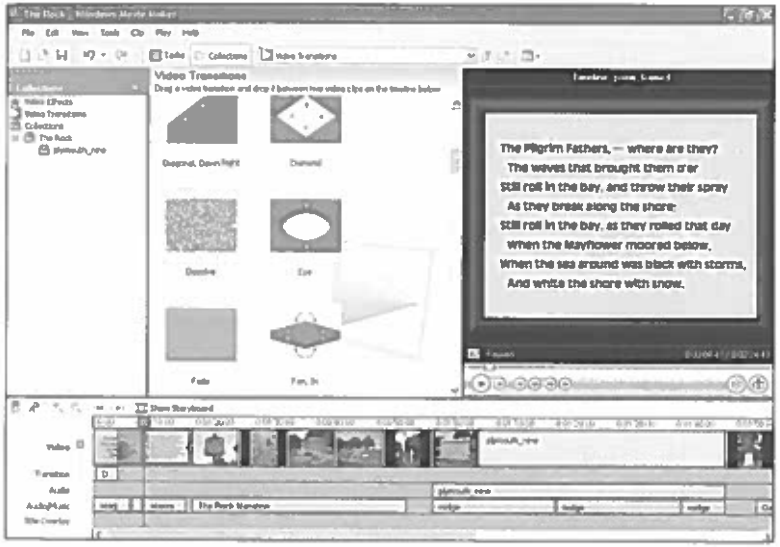
12. Students can type special text slides, like the poem shown, in PowerPoint and export them as a JPEG file to be used in the story.

13. Text slide display time must be lengthened to give the audience ample opportunity to read the text or the purpose will be lost.

14. Students should explore the choices available through the Tools menu.



Title and Credits—Movie Maker



Adding Transitions in Movie Maker

15. Students can apply special effects, such as transitions, to enhance the mood of their story, but these should be used sparingly. Transitions will appear in the transitions line of the timeline so they can easily be moved or deleted as needed.

16. Movie clips can be added, and if the sound that accompanies the video is not essential to the story, that track can be muted (by right-clicking the audio track in the timeline and choosing Mute from the contextual menu). By doing this, students can use a voice-over narration, or music, with the motion of the video, easing concerns about background chatter.

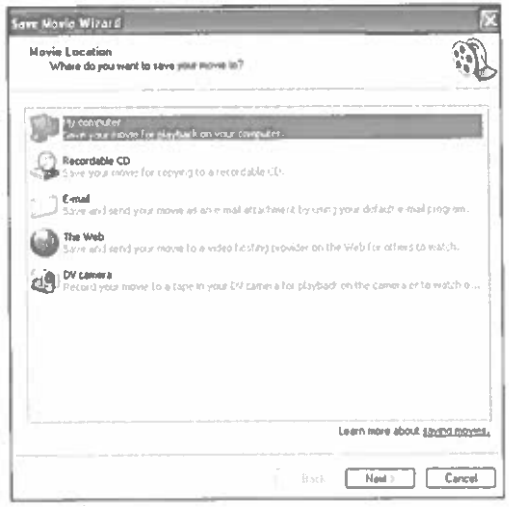
Creating the project video

17. Saving the project before rendering the story to video format is important, because no changes can be made to the movie once it is created. But, if the project is saved correctly, the project files can be opened in Movie Maker again, changes made, and another movie rendered.

18. When students are ready to create the movie file, they should pull down the File menu and choose "Save Movie File...." The "Learn more about saving movie files" link will help explain what the choices are.

19. Students should give the movie a name, choose a saving location, and wait while the story is rendered into a movie.

20. The movie will be playable in Windows Media Player.



Rendering to a movie format in Movie Maker

More Creativity Tools for Production

Although most digital stories can be produced and presented with applications and tools readily available and affordable for the classroom, it is wise for teachers to examine new creative tools. There are plenty of choices in commercial software for photo editing and video editing with pricing well under $100. Although iMovie and Movie Maker are more than capable free products, offerings from Adobe, Sony, Pinnacle, Corel, and others can add valuable and fun features and capabilities, especially for somewhat older and more advanced students.

In addition to commercial software, there are a number of web-based products that can fit into your digital storytelling bag of tricks. A couple I really like are Bubbleshare and Picnik.

Bubbleshare

Bubbleshare (www.bubbleshare.com) is an online tool for sharing photo-based slide shows. It's a cool program and can promote student interest in photography. Bubbleshare helps groups of students decide which photographs are important to their stories. It's not unusual for this selection process to take students a long time as they decide which photos will have the most impact with their story. The more simple the story, the less time it will take.

Picnik

Picnik (www.picnik.com) is an online photo-editing tool. It is easy to use, and it works well with photos hosted online and with photos stored on the computer. There is a free version

that provides basic photo manipulation, helping students move quickly through the process of resizing, enhancing, and saving photographs for their stories.

Creating and Editing Audio Files

Audio files are essential components of digital storytelling, whether they accompany a series of images or, as in podcasts, make up the digital story itself. Some useful podcasting websites are listed in the Resources section at the end of this chapter.

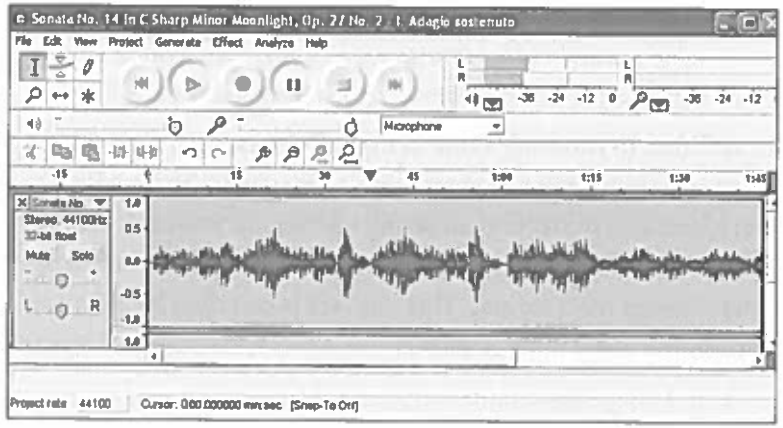
The value of sound is not to be underestimated even in visually based digital storytelling. Students should relate the music to the story, rather than just adding their favorite music clips. Remember, the point is to convey story with the use of just the right combination of digital components. Sound effects can also be a nice addition, as long as they don't detract from the narration or the music. Students tend to go overboard, enthusiastically adding sound effects, music, and narration to every project.

In addition to standing alone as digital stories, podcasts can serve as a supplement or extension to a visually told digital story, and as a source for gathering narrations. Podcasts can be created using inexpensive microphones to capture narration or interviews in MP3 format. This digital file can then be enhanced with sound effect clips or music.

Audacity

Audacity (http://audacity.sourceforge.net) is a free, open source sound editor application that is commonly used for recording narration and editing music. It is a cross-platform application and is virtually identical in use for Macintosh, Windows, and Linux users. Users download the application for their computer platform from the information under the application's Download tab. Users will want to visit the Audacity Wiki page listed under the Help tab. Here you will find tutorials and excellent directions for creating a simple podcast using Audacity. Audacity-related tutorials, tips, and instructions can be found at https://academictech.doit.wisc.edu/orfi/avs/Modules/audacity.htm.

Be sure to download the LAME MP3 encoder (http://lame.sourceforge.net) so that you can export your music or podcast as an MP3 file. This encoder is a plug-in, so install it to the Audacity folder inside the Plug-ins folder.



Audacity's audio-editing environment

Resources

Production

iMovie: www.apple.com/ilife/imovie

Learning in Hand (Tony Vincent): http://learninginhand.com

Photo Story: www.microsoft.com/windowsxp/using/digitalphotography/photostory/

Movie Maker: www.microsoft.com/windowsxp/downloads/updates/moviemaker2.mspx

"That's Plymouth Rock?" WebQuest: www.midgefrazel.net/wqprock.html

Creativity Tools for Production

Bubbleshare: www.bubbleshare.com

Picnik: www.picnik.com

Audacity: http://audacity.sourceforge.net

Audacity-related tutorials, tips, and instructions: https://academictech.doit.wisc.edu/orfi/avs/Modules/audacity.htm

LAME MP3 encoder: http://lame.sourceforge.net

Podcasting

Poducate Me: Podcasting in Education: www.poducateme.com

Podcasting: How to Create a Podcast: www.voices.com/podcasting.html

Podcasting Tools: www.podcasting-tools.com

Lessons Learned about Podcasting Microphones: www.speedofcreativity.org/2008/01/06/lessons-learned-about-podcasting-microphones

As students prepare for their future, they must learn about other places and different cultures. They must learn how to relate to people who live and work in those places. The Internet has narrowed the distance between classrooms, bringing them together from around the globe. "Digital storytelling in the community" may mean the local community, the national community, or even a community on another continent.

Beyond the Classroom Walls

Global collaboration at the middle and high school level can yield some terrific learning experiences with the ever-expanding access to photographs, videos, and music that the Internet can provide. Stories of places both near and far are being created, transformed into video, and shared by K–12 students. Younger students are eager to learn about the neighborhood around their school, but as students get older, this neighborhood can extend, via the Internet, beyond their town, city, state, or country.

Curriculum areas in social studies, such as geography and local history, are a natural fit for digital storytelling in the local community, bridging classroom to community. Students benefit from the experience of exploring the world around their school with the help of a digital or video camera. Researching local heroes, both past and present, can result in digital stories rich with oral history interviews, displays created for local museums and libraries, and presentations given to community groups.

Community-based science projects can foster awareness of local community issues such as recycling, conservation, and beautification of community property. These projects can help

students build a memorable and lifelong connection to their community.

National or global issues such as global warming, medical care, nutrition, and dependency on fossil fuels are a few examples of current issues students can learn more about through research and digital storytelling. And such projects can be a way for students to feel actively involved in issues they care about. Every teacher can remember at least one bored and apathetic student who became engaged and enthusiastic through making hands-on discoveries, and then sharing those discoveries with teachers and peers.

Digital Storytelling Ideas for History, Science, and Community Issues

- Community-based projects
- Restoration of local parks
- Study of local memorials
- Study of local architecture
- Local heroes
- Investigation of local rivers, ponds, and other waterways
- Local landscaping projects
- Neighborhood service helpers (fire, police, medical)
- Restoration of local historical graveyards
- Importance of affordable housing

Opportunities for connection to the community through curriculum-based projects in digital storytelling could involve, for example, developing mapping skills, learning about GPS technology, studying local community laws, or exploring geophysical concepts. Applying lessons learned in the classroom to community outreach projects often helps bring learning to life for students in all grade levels.

Place-Based Digital Storytelling

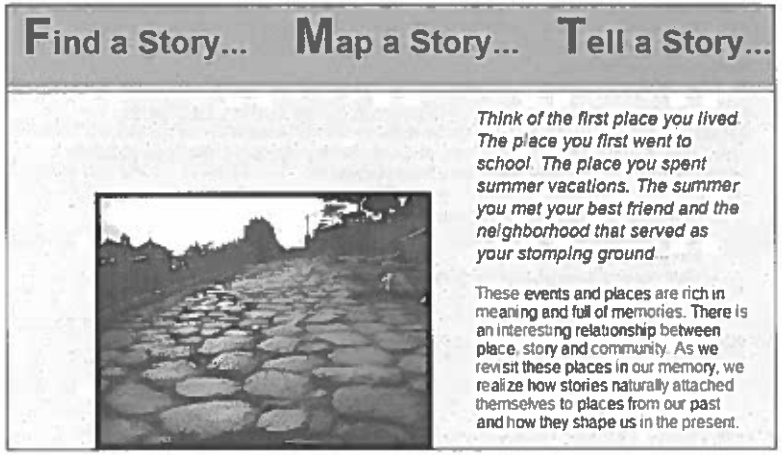
Making a connection between past and present is a concept that some students struggle with and others find intriguing. Here are just a few thoughts that can stimulate a classroom discussion: Think of your own home, school, or neighborhood as it looks today. Do you know how was it different in the past? Can you imagine what it looked like? The notions that streets were originally dirt paths, didn't have sidewalks, or even had a different name are the kinds of ideas that might stimulate students' imagination and a lively discussion.

An interesting related topic is that maps on paper are different from online and GPS-created maps. Some students may wonder how people managed to navigate without GPS, or at least an online map that gives driving directions. Others may be eager to share that their family still keeps paper maps in the glovebox and gets around just fine.

Place-based digital storytelling, often called storymapping, is a form of digital storytelling that uses online mapping tools such as Google Maps (http://maps.google.com) or CommunityWalk (www.communitywalk.com). Students choose a familiar area nearby, or one they have previously visited (for example, on a class fieldtrip), find it with the mapping tool, and create a digital story in narrative form. Students place photos on the map, and the story develops from the actual place.

Brenda Dyck has created a model of this mashup of mapping and digital storytelling on her website: Find a Story . . . Map a Story . . . Tell a Story (www.rebooting.ca/place/). Her project idea is to have students locate a map of a memorable area, one

they can tell a story about. Students place markers on the map corresponding to parts of the story. On Brenda's site, she offers several examples of this combination of story and place as a digital experience, as well as step-by-step instructions for lesson building and a suggested rubric.



Brenda Dyck's place-based storytelling web page

Annette Lamb and her husband Larry Johnson have created a resource that builds on the place-based storytelling concept, enhancing the learning experience through the use of GPS devices (http://eduscapes.com/omrp/gps.htm). The GPS and GIS technology brings virtual nature walks, or virtual walks through history, into classrooms that may be far from such places. Students who live in the city can now experience the stories in literature where nature is a theme, or "visit" important locations from their history books. Extended to global classroom partnerships, this approach may become a new, collaborative way to look at geography.

Place-based Learning

Place-based education connects schools with the local community by grounding learning in local phenomena and lived experiences. Rooted in Dewey's focus on authentic learning, placed based approaches include cultural and historical studies, nature exploration, and real-world problem solving.

This idea of authentic, experiential learning also has roots in the Foxfire movement of the 1960s stressing active learning, collaboration, reflection, creativity, and community connections. The program focuses on 11 core practices that revolve around the idea that "classrooms should be dynamic learning sites where students and teachers work as partners to meet the goals of the curriculum". Read about their eleven core practices for teaching and learning.

Read Michael L. Umphrey's Tinkling Cymbals and Sounding Brass: Hearing the Different Drum. His article focuses on the need to develop education-centered communities where students, teachers, and community members collaborate to build a strong community. Umphrey advocates five approaches:

- Make community the focus of serious study
- Use oral interviewing
- Invite mentors to join
- Give "gifts of scholarship" back to the community
- Establish an archives

Annette Lamb's place-based story web page

Cultural Digital Storytelling

In every community, and to some extent at every grade level, students learn about cultures near and far. Whether it is a standards-based activity meant to prepare students for test-taking, or a supplement to other core-curriculum studies and activities, student research into domestic or foreign cultures is now supported by a growing collection of online resources that can be applied in the students' digital stories.

Rushton Hurley, founder of Next Vista for Learning (www.nextvista.org), has created an online repository for educational videos created by teachers and students. His website hosts a growing variety of curriculum-based short videos. Hurley also promotes digital storytelling in his presentations to educators

at local and national conferences, encouraging teachers to work with the wide variety of video-making applications to create their own curriculum-based videos.

In his Light Bulbs collection, Hurley has created a video, *Introduction to Japanese Religion*, for high school students and their teachers as a basis for understanding how religion and culture are strongly intertwined in the everyday life of the Japanese people. This video could be used as an example of how students might create stories that introduce globally significant topics to their fellow classmates.

Next Vista for Learning web page

Hurley has provided a way for educators to download the video for offline use in the classroom (see figure above). Because many of the other video-hosting web portals are often blocked by schools' content filtering, it is important for educators to be able to freely download videos for offline viewing. The comments

section of Next Vista provides a way for educators to share how they used these videos in their teaching.

Scientific Digital Storytelling

Students who are inspired by the wonder of nature and possess natural curiosity about the scientific world will find their own level of emotional connection to tell the stories of their future plans for invention, medicine, and even saving our planet.

Weather, especially extreme weather, is a fascinating science topic for many students. Storm science can tell us about the history of our Earth, and it can also provide great material for digital storytelling. Natural disasters and the events following them provide stories about storms and the science behind them, and also about the people these storms affect. After a storm has ripped a community apart, stories about character, teamwork, and community rebuilding are there to be told.

A project of this scope—and this is only one small idea—requires fact-based evidence research and oral interviews. It also requires a certain amount of imagination and creativity on the part of the student. Often, it's these kinds of challenges that engage and motivate students who might otherwise have stayed slumped at their desks.

Expanding on the ideas of using storm science as the basis of a digital story project, students could visit their local library or historical society to look for photos of the effects of extreme weather in their own city or town. Conducting research in this way helps students learn valuable archival and research skills.

Also, local historians can be the voice telling the stories of wintry blizzards, wild tornadoes, or hurricane devastation, and how the community was rebuilt. Related stories might focus on the prediction of ferocious storms, or on how people survive them when they come. For example, New Englanders are fiercely proud of stories of powerful hurricanes, humid summer heat, and springtime blizzards. These stories have been passed down orally, some for generations. Digital storytelling offers another way to preserve such stories. Every community and family has photographs and yarns to spin around the storm of such and such a year.

Links to some good websites to search for photos of wild weather can be found in the Resources section at the end of this chapter.

Wild weather example photograph

Global Digital Storytelling

Students have a natural curiosity about the daily lives and experiences of their peers in distant parts of the globe. If children are starving or soldiers are dying, students often feel an emotional connection to those unseen faces in unseen places. Questions of global community are important in the lives of today's students, perhaps more so than in previous generations. When seeking out a subject for this area of digital storytelling, I suggest that you take a broad view of today's world issues. Perhaps begin by posing a question to your students about one of these issues or about an interesting area of the world. (Of course, this work must fit with your curriculum content and should be assessed on that basis.)

The Internet makes collaboration between classrooms possible, even when those classrooms are on opposite sides of the globe. Although there are always issues when conducting multiclassroom projects, digital storytelling can make the process more practical. Because an online digital story can be presented asynchronously, time zone differences are minimized. Additionally, digital stories, especially formats that rely primarily or exclusively on images and video, can help bridge language barriers.

Examples of these types of stories can be found at the Next Vista for Learning website (www.nextvista.org), which includes Global Views, a collection of videos about communities around the world that were made by and for teenagers.

Open-Ended Questions: Digital Storytelling and Community

These sample open-ended questions are provided to give you, the educator, ideas for developing critical thinking activities to accompany digital storytelling projects. They are meant as samples, and I encourage you to make up your own that may best fit your curriculum and your project. Consider the timeline for each phase of the project and how the digital story will be told before deciding on the guiding question.

- What is the best way to decide whether a particular photo has historical significance?
- What questions might future generations have about the digital stories we tell today?
- What ideas do you have on how technology assists teachers, parents, and students to learn more about local and global geography as part of a better understanding of the global economy?

Resources

Historical and Cultural

Flickr—The Commons (publicly-held photography collections): www.flickr.com/commons

Library of Congress Photos on Flickr: Frequently Asked Questions: www.loc.gov/rr/print/flickr_pilot_faq.html

My Friend Flickr: A Match Made in Photo Heaven: www.loc.gov/blog/?p=233

Next Vista for Learning: www.nextvista.org

Place-Based, or StoryMapping

Find a Story... Map a Story... Tell a Story...: www.rebooting.ca/place/

GPS and Place-Based Learning (Annette Lamb): http://eduscapes.com/omrp/gps.htm

CommunityWalk: www.communitywalk.com

Google Maps: http://maps.google.com

Weather

Wild Weather, NOAA Weather Library: www.photolib.noaa.gov

Creative Commons: Search for Images: http://search.creativecommons.org

Weather Links at Kathy Schrock's Guide for Educators: http://school.discoveryeducation.com/schrockguide/weather.html

A Final Word about Digital Storytelling

We've used the phrase *digital storytelling* in this book to cover a broad array of projects and products, including scrapbooks, portfolios, class research projects, and independent research projects. The digital tools available on the Internet as part of the Web 2.0 family of open-source software have opened up a whole new world for the application of hands-on learning in the K–12 classroom.

Classic digital storytelling applies the tools we have reviewed in this book to bring classic storytelling, the written or oral presentation of story, to life on the computer screen, shared with the audience through further application of the technologies.

It is my firm hope that you will find the right application for these tools in your classroom.