



## KQED Digital Storytelling Manual

The art, skill, craft, and magic of digital storytelling—  
a how-come, how-to guide

UPDATED 2008 VERSION



## Welcome to KQED and Digital Storytelling!

This manual for beginning digital storytellers contains KQED's approach to digital storytelling plus tips and techniques to help you achieve impressive results in your productions.

A digital story is an engaging and creative multimedia production in which people or organizations document, preserve and share memorable stories of their lives or significant experiences of a group that are worth repeating. The multilayered process results in a tangible, valuable and lasting record of powerful experiences to save and share.

We hope you find this manual useful, and consult it often throughout your digital storytelling workshop and beyond.

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at the Digital Media Center

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KQED

# Introduction to Digital Storytelling

KQED

## What is digital storytelling?

Digital storytelling has been practiced since the early 1990s when consumer-level technology, including personal computers, video cameras and scanners, proliferated to make home video production possible. This was a monumental shift in a creative field previously available only to professional video producers at facilities with expensive equipment and specially trained technical staff to run everything. The technical process was complicated in the early years of digital storytelling, and completing a story often required a significant amount of technical (hardware and software) support. A nontechnically inclined storyteller was frequently frustrated, struggling with complex equipment that hampered his/her creative ability to put images to the words in mind.

Thanks to ongoing research, technology continues to evolve, become more simplified and attainable. Today, the tools and process of digital storytelling have been so streamlined that even first-time computer users can achieve excellent results!

From a broad perspective, digital storytelling can encompass many forms of creative expression. However, as an accepted definition, digital storytelling is the modern manifestation of the ancient art of storytelling. Throughout history, storytelling has been used to share knowledge, wisdom and values. Digital storytelling uses digital media to create visual stories to show, share and, in the process, preserve as history. Digital stories derive their impact by weaving together images, music, narrative and voice to give depth and dimension to the narrative. By using the Internet and other forms of digital distribution, digital stories can be seen across distances and boundaries to create new communities through a sense of shared meaning.

## **The KQED Digital Storytelling Initiative: Helping people find, tell, create and publish the stories of their lives**

The KQED Education Network's Digital Storytelling Initiative offers hands-on digital storytelling workshops that teach the principles of multimedia through storytelling. Two-, five- and 10-day workshops are available for teachers, students, community activists and any interested organization. Our participants learn by doing, and they get to create their own stories in an encouraging, fun environment. The goal of these workshops is to provide everyone involved with the intellectual, technical and creative skills necessary to independently create digital stories about their work, school or personal endeavors. The KQED Digital Storytelling Initiative (DSI) comes equipped with a state-of-the-art portable computer lab. Hardware and software configurations are customizable for individual groups or classes.

### **The DSI workshop process is based on these simple stages:**

#### FINDING THE EXPERIENCE

Story exploration and discovery exercises help participants identify potential story ideas, then narrow them down to a specific focus. Thus, the story narrative begins.

#### TELLING THE STORY

Workshop participants are taught how to verbalize and visualize their story through scripting and storyboarding. After identifying and collecting supporting audio/visual materials, they digitally prepare all the pieces for the editing process.

#### CREATING THE PIECE

Students create first versions of their story using video and audio editing software. Revisions are made and enhancements, including titles, credits, graphics, video transitions and sound effects, are added for polish and impact.

#### PUBLISHING THE WORK

With their movies completed, students now learn how to export their story for play on different media and platforms, such as CD, DVD, VHS tape and the Web. Students also touch on the bigger picture, discussing how the digital storytelling process and curriculum could be used as an agent for change in communities or organizations they care about.

Each of these KQED Digital Storytelling stages and the corresponding technology will be examined in closer detail in the chapters that follow.

**Finding the Experience**

Story Styles

Narrative Theory: Finding Your Story

The Restorying Process

## Story Styles

The KQED/DSI suggests several types of story styles you can use to create your digital story. Your instructor will show examples of each style to familiarize you with its format and be there to provide insight when you begin to conceptualize your project.

### A STORY NARRATED WITH YOUR VOICE

Stories created in a narrative style are the most personal in topic and tone. Written in first person, narrative stories are narrated with your own voice. Narrative digital stories are often the source of personal discovery and introspection, where we generally find out something personal about the author. The story “drives”—or takes precedence over—the images; the meaning is expressed through the narrative and supported visually by the images. We will examine some useful methods to identify and focus a narrative story later in this chapter.

### A STORY WITH MUSIC

Most commonly recognized as music videos, this type of production is a story without words, although captions, titles and the blending of lyrics and visual imagery can personalize the piece.

### A STORY WITH INTERVIEWS

Different people (including yourself) tell a story with interviews and the author provides supplemental images to support what is being spoken about. A common technique is to weave an entire story through the voice and reflections of others; this method is enhanced through multimedia technology, which allows voices to be heard while different images are seen. A story using interviews can also be mixed with a story including narrative. We will explore tips for effective interviewing later in this manual.

## Narrative Theory: Finding Your Story

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A well-crafted digital story is a seamless blend of multimedia technology and the inherent ability to find meaning in our experiences and tell that story. While technical skills are easily taught and usually just as easily learned, identifying a compelling personal story and translating it into narrative can be a difficult and overwhelming experience. Some people who are completely capable of sharing a story in casual conversation become apprehensive at having to prepare a story in script form for their digital story. Perhaps there is an element of fear in the notion of creating something tangible or permanent and “getting the story right.” It is helpful to remember that these are *your* stories. How they are told and supported through visuals is a unique and individual process; there is no one correct approach. However, to help identify your story and tell it effectively, the KQED/DSI recommends these key processes in eliciting stories that have proved successful with a broad range of students.

### ABOUT STORIES

Our identities are filled with stories, which provide insight into who we are. Stories mined from our lives are a direct connection to what our experience on the human journey is. Stories can explain and illuminate:

- Who we are
- Where we came from
- Where we are going
- What we care about
- What is important to us

A good story has a beginning, middle and end. Make the beginning captivate your viewer. Perhaps frame it with a question, dilemma or controversy. It should compel us to continue to watch; we want to see how the problem is resolved. The middle describes the course of events: What happened? The end of a story reveals a conclusion: How did the situation turn out? The story's end is also a good place to present your meaning or point. The experience of watching and hearing the story should leave us changed or wanting to learn more.

### STORY IDEAS AND THEMES

Ideas and inspiration for personal stories can come from many sources. Your KQED/DSI workshop instructor will show examples of digital stories created by former students, then lead a discussion of classic story themes. She will also assist with memory trigger and brainstorming exercises to help you identify a story you feel is meaningful to tell. Here is a small selection of common story themes. Yours need not fit into one or any of these categories. Once you begin to think about stories using common themes or memory triggers, you will find the possibility for a story worth digitizing is endless!

**Some common personal story themes include:**

REMEMBRANCE OR MEMORIAL STORIES

Stories that acknowledge, honor or reflect on the life of one who has died.

RELATIONSHIP STORIES

Stories of significant relationships in your life. Common subjects are immediate relations, including parents, grandparents, siblings, spouse or partner. Other meaningful relationships may include a business or creative partner, a teacher or mentor, childhood or lifelong friends, even pets. Who are these subjects and what impact have they made on your life? Consider including stories of love, admiration, longing or loss, disappointment or a poignant reflection of a person.

THE GENESIS STORY

Almost all people, groups or businesses can point to a significant moment or event in the past that was a determining factor in how things are today, e.g., “If my mother had not taken a ceramics class, she would not have met my father...” The genesis story is an essential part of almost all family histories, examining the question, “Where do we come from?”

STORIES OF CHALLENGE

Stories in which you have experienced challenge and how (or whether) you overcame it. They can be physical as well as mental challenges, i.e., the challenge of climbing a 15,000-foot mountain, conquering the fear of changing careers or returning to school after an extended absence.

OBJECTS AND ARTIFACTS

All of us have owned or known of a possession that held tremendous value in our lives and the compelling stories that accompany them. Objects or artifacts can be as varied as a lucky charm, a rock found on a memorable hike or a precious family heirloom handed down through many generations. What are these objects, how do they exist in your life and what value do you place on them?

HURT AND HEALING

Sadly, it is guaranteed that human beings will experience at least some element of emotional suffering. Stories about pain and the healing process are ultimately about resurrection and finding a way to continue. These types of stories can be about hurt and how that changed you.

#### STORIES ABOUT A PLACE

Stories about locations, specific or vast, capture memories. Geographical places hold intense memories and emotional significance in our lives. Whether you have a fond memory of spending childhood summers on a grandparent’s farm or the painful recollection of a war combat zone in a distant country, reconciling stories and emotions of these places is a useful exercise in understanding ourselves—we might refer to it as narrative archaeology: What’s buried in this place?

#### ADVENTURE, JOURNEY OR TRAVEL

This theme is an abundant source of stories, for we have all had some sort of journey or travel experience that can be told as an adventure.

#### THE SHOE BOX OF STORIES

Countless stories can be found in the well-worn shoe box or photo album filled with our treasured photographs. Each photo preserves a moment in time and each moment has a corresponding story: “Where was I when this photo was taken? Who took it? Who is in the photo with me? What was I thinking when this was taken?”

#### **Conceptualize Your Story: Narrow the Focus**

Once you have decided on a particular theme or topic for your story, you begin the process of planning how the story will be told. At this point, it is often necessary to narrow your focus. Telling the entire history of a beloved grandfather in a single short story could be an overly ambitious task. It is often hard to know where to start a story with a broad topic, and usually harder to know when to end it. By thinking about a particular aspect of the relationship that was important to you or a specific event you shared—perhaps relating a bit of wisdom or transformation that occurred—you conceptualize a core story. Questions to consider in this order narrow the focus of your story:

- What is the main question or problem this story will explore?
- What events or experiences occurred that will help to tell this story?
- How did it end?
- How did I feel (in the beginning and at the end)?
- How was my perspective or viewpoint changed?

### **Conceptualize Your Story: A Point of View**

Having and expressing a point of view is critical to any good story. All stories are told to make a point from a particular perspective. Without a point of view, a story is reduced to a mere recitation of facts. If the point is to tell something about yourself, it will be helpful to incorporate something emotionally engaging, something you care deeply about. A point of view allows others to understand how you feel about your story and what compelled you to tell it in the first place. Emotional points of view can be derived from:

- A dream
- A wish
- A disappointment
- A fear
- A belief
- A loss
- A discovery
- A success
- Something exciting

### **Conceptualize Your Story: Voice**

The sound of your voice is unique and special. In digital storytelling, we talk of the voice, both as what it means in audible terms as well as in its narrative and storytelling terms. For digital stories that are created in a narrative style, we recommend using your own voice for several reasons. First, if the story is a personal one, who better to narrate it than you? Your voice, your manner of speaking, your inflections and tone all identify you, which will add authenticity and a sense of identity to your story. When writing your script, we recommend you include elements of your unique phrasing style and sentence structure. Narrative writing has a different cadence and rhythm than business or other formal forms of writing. More organic, it resembles the manner in which you naturally speak. By embracing your voice both in writing the script and for the narration, the ownership and authorship of your story become wholly yours.

## Conceptualize Your Story: Audience

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In any created piece, you must take the audience into account. In broad strokes, the audience for every piece is a general audience, but on closer inspection, we often have a specific person or group of people in mind. Answering these two questions will help to define your audience:

What do I really want to say?  
To whom do I want to say it?

The first question will lead you to better communicate the meaning behind your story; the second will aid you in discovering the embedded audience. To discover your real audience, ask yourself who really needs to hear it.

Understanding who your audience is will lend insight into appropriate tone and diction. You could relate the same experience to three different people and, depending on who they are, the story will be different even though the experience is the same. The way you tell a story to your mother is very different from how you tell it to your best friend. Knowing your audience will help determine how to best to tell this story.

## The Restorying Process

Telling stories is one of the most powerful methods humans have for sharing meaning and understanding with one another. Human stories are unique in that each individual's account will be different than another person's, even if the exact same experience happened to both people at the same time. People have different perspectives and thus story their lives unique to their interpretation and identity. The process of examining a story, reconstructing it through narrative and ultimately releasing it in a tangible form alters the experience from one person's internal account into one available for internalization and interpretation by others. By this act of conscious release, a story is transformed.

The restorying process can be used as an agent for personal change and the transformation of a negative experience into a positive one. As a therapeutic application, storytelling is a technique that encourages people to analyze events and relationships clearly and put them into perspective. This process grants permission for a negative or stressful situation to be developed into a positive or resurrective narrative. The concept is simple: you can't change what happened, but you can change where you stand in relation to that story. That is, you don't need to stand in the victim's place. If you retell the story, you become the author. Through that reauthoring process, the story gets rewritten according to your version of it.

**Telling the Story**

Creating a Storyboard

Digitizing Assets

Organizing Your Computer to Work:  
File Management in iMovie

## Creating a Storyboard

Up to this point, we have focused our discussions on defining digital storytelling. We've also offered suggestions on how to think about a story you would like to tell and the various story styles you can use to visually express your story. In this chapter your story will begin to take shape. You will learn how to create a storyboard, then begin working on the computer to organize and digitize your materials in preparation for the video edit.

Creating a storyboard for your digital story is an important and necessary process for visualizing what your story will look like in its completed form. The digital stories made in this workshop are time based—they progress across time in a linear format. A storyboard is a visual road map that allows you to organize what you will be seeing and hearing as your story moves from beginning to end. Creating a detailed storyboard in advance of the editing process helps you to think about the images (photographs, video, other types of artwork) your story will need and provides a guide for you to follow during the edit. Having a well-thought-out storyboard in advance of production reduces the likelihood that you will end up frantically searching for visuals as you go along.

### THE STORYBOARD TEMPLATE

We have provided a blank storyboard template at the end of the manual for you to create your storyboard. Starting in the upper-left corner of the page, use the square boxes for simple sketches or drawings to represent the visuals that will be taking place. The space beneath the boxes is used to indicate the audio that accompanies the visual. It is not necessary for you to include the entire text of your script in this space, but it may be helpful to include the beginning and end of the audio portion for each panel so you are clear on exactly what will be said in that section of the story.

Move from left to right, filling in the panels with script and key images as you go. The final panel should be the end of the story, and don't forget a panel for credits! How detailed you make your storyboard is up to you. If this is your first digital story, you may wish to organize your storyboard so each scene change is a new panel. You may prefer to create your storyboard based on the script, with a new panel for each sentence. The main thing is for your story script to be complete and for you to be familiar with all the images needed to support it and to know exactly where they will be used. As you move into the next sections of this manual and begin working on the computer, keep your completed storyboard handy for reference. And remember, your storyboard is a map to guide you—it is not set in stone, and it will likely change as you start to create your piece.

## Digitizing Assets

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### OWNERSHIP OF MATERIALS

Before we move on to the details of digitizing your materials, we'll briefly address the issue of ownership of materials and using materials in your digital story that you don't own. When you are considering and gathering images and music for your digital story, keep track of who owns or created the images and sounds you plan to include. Using materials that are exclusively owned by you—meaning you took the photograph, created the artwork, wrote the soundtrack—ensures there are no copyright infringement implications. However, as a beginner, you probably don't have all of the materials you need and will therefore need to supplement your story with images and sounds created by others.

The Fair Use Policy of the Copyright Law of the United States of America traditionally allows you to use someone else's work of art to create a new work of art. However, record and entertainment lawyers contesting this approach are attempting to redefine the Fair Use Policy to mean no use without permission or likely compensation. Copyright attorneys are deep in battle, so stay tuned for further developments. In the meantime, if you choose to use images or music in your digital story that are not your own, please acknowledge and credit the author of the material.

<sup>1</sup> Webopedia [www.webopedia.com](http://www.webopedia.com)

## PREPARING VISUALS

Visuals are essential to a good digital story. Images used for the video portion of your digital story reinforce the audio as well as help move the story forward and provide context. Visuals can be photographs, video, scanned memorabilia (newspaper clippings and other flat art) and artifacts. Following are processes for digitizing various forms of visuals.

### CAPTURING (STILL) PHOTOS FROM A DIGITAL CAMERA

Photographs taken using a digital camera are ideal for digital storytelling purposes because they do not require resizing or alteration of the pixel resolution before use. For the most part, digital cameras, regardless of brand or model, do not need software to transfer, or download, the photographs to a computer. The most commonly used camera storage devices are memory cards and memory sticks. Depending on your computer, some of these storage devices can be inserted directly into the equipment. If your computer does not provide for an internal reader, an external reader can be used. Such readers are connected to the computer via a digital cable, and they may require software for operation.

When read correctly by your computer, your digital photographs will appear in a folder on your computer desktop. To view them, double-click the folder to open it, then select each file (the photographs will likely appear as .jpg files) by double-clicking it. Select all of the photos in the file by selecting All (**Apple or Command + A/Ctrl + A**) and double-clicking the selection.

In some cases, Apple's iPhoto application will launch automatically to view the photos. It is your choice whether or not to use iPhoto to organize your photos. We suggest organizing all of your digital storytelling project files, including photograph files, in a separate folder on the desktop. For simplicity, name a folder with your name followed by the word "**Materials**" (example: **Leslie Rule Materials**). Create subfolders to hold categories of materials, such as "**Scans**" and "**Photographs.**" Move your desired photos from the digital device folder into your Photographs folder by selecting, then dragging and dropping them.

Create the following folder structure on your desktop to contain your materials:

Folder: **Leslie Rule Materials**

Subfolder: **Scans**

Subfolder: **Photographs**

## SCANNING NONDIGITAL MATERIALS

Although preparing digital photographs for your digital story is relatively straightforward, some of the images you wish to use may not have been created digitally and therefore will need to be digitized before they can be included. To digitize hard-copy materials such as photographs, memorabilia, articles and artifacts, use a scanner. Scanning is an easily learned skill, but requires more time than merely downloading images from a digital camera.

To scan materials, be sure you have a scanner that is compatible with your computer and that the necessary scanning software installed. (Adobe Photoshop and Adobe Photoshop Elements both have the ability to import scans. Check their Help sections for information regarding installation of the necessary plug-ins.) A flatbed scanner will accommodate almost all still photographs and hard-copy materials and may include an adapter for scanning slides.

Scan your material at 300 dpi resolution. Save all of your scans in your Scans subfolder and title each scan file as clearly as possible so you can identify the content by its name. For the purposes of digital storytelling, save your scans to your computer in jpg (pronounced jay-peg) format. An example of a correctly titled and saved scan would look like this: redflower.jpg.

If you have a lot of photos or other memorabilia, you may want to scan several items at once, saving the group scan as a single file. You can reopen this file at a later time and use the cut and paste functions or the Divide Scanned Photos option in Photoshop Elements to separate single images into new individual files.

## ENHANCE PHOTOS USING ADOBE PHOTOSHOP ELEMENTS

Very few photos are perfect. When you examine yours with a critical eye, you may notice that some are faded or yellowed with age, over- or underexposed, crooked, even out of focus. Depending on the context in which these images are to be used, these imperfections can add authenticity to your story—but they can also be distracting.

One of the wondrous features of working with digital imagery is the ability to color-correct, enhance and edit the images using software created specifically for these purposes. The KQED DSI recommends software by Adobe Systems. For the beginner, Adobe Photoshop Elements, available for both the Mac and the Windows platform, is an affordably priced, yet powerful consumer-level enhancement and organization application designed for anyone wishing to improve or alter their photographs.

For the more ambitious and experienced user, Adobe Photoshop is the professional-level version of Elements. It is an industry standard, and although it costs significantly more than Elements, it is a much more in-depth application, capable of advanced digital image enhancement as well as graphic and Web design functions.

Before you import your photos into iMovie or Movie Maker, the KQED DSI recommends taking a few quick (five minutes) and easy steps to improve any photo by 90 percent. These steps include: rotating, straightening, cropping, correcting color, and using the clone stamp tool and, if needed, the red-eye correction tool. Take a few minutes to apply these easy enhancements to each photo and you will see a dramatic improvement in your photographs!

To begin using Photoshop Elements, double-click the application icon (a digital camera) in the dock of your Mac or on the desktop in Windows.

### Open an Image

Open an image that you wish to alter/enhance by using the standard **File>Open** approach and navigating to a target image, likely located in your Scans subfolder. If the image you want to work on happens to be part of a group of multiple scanned images, you can easily separate the individual images by choosing **Image>Divide Scanned Photos**. Notice that each image separates from the group scan and is now its own individual copy located in the **Photo Bin** in the lower portion of your workspace (you may need to un-collapse the Photo Bin area to view the photos). Divide Scanned Photos may not place the images into their correct orientation, but it does apply an automatic straighten pass that may be sufficient. If further straightening is necessary, refer to the Straighten and Crop section below.



Open an Image



discarded. If you are not happy with the crop you have selected, press the ESC key, which will remove the bounding box. You can then redraw your crop. You may also use the handles on the corners and sides of the crop to reposition the crop as desired. When you are satisfied with the areas to be retained and to be discarded, complete the crop by clicking Enter or by clicking the green checkmark located at the lower-right corner of the crop box. Cancel the crop by clicking the red Cancel button.



Crop tool

*Helpful Hint: In setting your crop, remember that you are preparing images for use in a video production where the aspect ratio is horizontal (wider as opposed to taller). Although most desktop video editors automatically scale images to fit their aspect ratio, for the best-looking results in your digital story, select a crop that is approximately 4 lengths wide to 3 lengths tall. If you prefer to set a pixel size to help you set a crop, set the crop width to 4 inches and the crop height to 3 inches. This will give you an idea of what the horizontal aspect ratio will look like. An image that is cropped vertically (taller than wider) will appear smaller in the video edit because the video editor will accommodate for the aspect ratio of the image and will automatically insert a black background to fill in the empty horizontal space that does not contain part of the image.*

Once the crop has been made, save the cropped image as a new (separate) file. To do this, choose **File>Save As**. If you just do a regular Save instead of a Save As, you will lose the original image and be left with only the cropped one.

## Correcting Colors

Photoshop Elements provides nearly endless possibilities for correcting and adjusting the color of images, including a series of automatic functions accessed through the **Enhance** menu. These automatic processes include **Auto Smart Fix, Auto Levels, Auto Contrast, Auto Color Correction, Auto Sharpen** and **Auto Red Eye Fix**. Although these automatic functions may provide successful results, there are other options that can target specific color problems. Here we will detail instructions for several processes to help you dramatically improve the color quality of your photos.

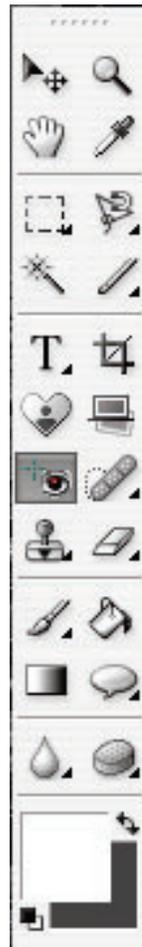
If you are using older scanned photos in your project, you may notice that, with age, some photos may have developed a cast of color. This color cast can often be easily corrected by choosing **Enhance>Adjust Color>Remove Color Cast**. Following the instructions in the dialog box, use the eyedropper tool to choose a part of the image that should be gray, white or black. Elements will adjust the photo based on where you click. You can move the dropper around and review the results as you go until you find the result you like. Click OK to accept.

Adjust the hue and saturation of your photos by choosing **Enhance>Adjust Color>Adjust Hue/Saturation**. This process is helpful for correcting color saturation (purity of color) and hues (colors) in photos whose colors look washed out or oversaturated.



Auto Levels

Another option for adjusting the overall color balance of your image is to use the Color Variations option. Choose **Enhance>Adjust Color>Color Variations**. This option operates on a color wheel theory, in which by adding one color you subtract from another. Select an area of the image to adjust, such as the default midtones, then adjust the color intensity by increasing or decreasing Red, Green or Blue. You may also Lighten or Darken the image. Preview your changes in the before-and-after area until you are satisfied with the results, then click OK to accept.



Adjust the skin tones of your human subjects by using a function specifically designed for this task. **Choose Enhance>Adjust Color>Adjust Color for Skin Tone**. Then click an area of the subject's skin tone and Elements will attempt to improve the color. You can also make adjustments by adding or removing yellow/orange to/from the skin tone using the **Tan slider**, and you can increase or decrease the amount of red/pink in the skin tone using the **Blush slider**. Adjust the overall temperature of the photo with the Temperature slider, from cool on the left to warm on the right. Preview your work until you are satisfied; use the Reset button to begin again.

Adjust the brightness and contrast of your image by adjusting the luminosity levels. **Choose Enhance>Adjust Lighting>Levels** and a histogram bar graph in the center of the dialog box represents the luminosity, or brightness, levels in the image, from blacks to whites (left to right). Start the process by clicking the **Auto** button; the levels will now be spread from the shadow (black) to the highlight (white) areas of the histogram. Make the midtones lighter or darker by moving the middle slider to the left or right. To apply changes, click OK.

#### **Red-Eye Removal and Retouching**

Red-eye is an undesirable by-product of a photograph taken using flash, and Photoshop Elements offers a tool specifically to remove red-eye. First, zoom in to a comfortable level to clearly see the red-eye. Next choose the **Red Eye Removal** tool from the Tools palette and position it in the area of the red-eye. Place the cursor in the target area and click the tool once; Elements will process the results and turn the red-eye area of the iris black. If the result is not satisfactory,

undo it by using Ctrl + Z/Apple or Command + Z and try again by repositioning the cursor in a different area of the red-eye.

### The Clone Stamp Tool

The clone stamp tool is a useful way to easily add or subtract a portion of image (also known as montage) and retouch imperfections in your photographs. To touch up an undesirable blemish from your photo, first select the **Clone Stamp** tool and position it in an area that has the color you wish to use as a replacement color. Select an appropriately sized brush from the pop-up palette in the Options bar or use the keyboard commands of left or right bracket (to the right of the P key) to increase or decrease brush size. Next, click and hold the mouse while pressing the Option (Mac) or Alt (Windows) key; this will pick up the targeted color. Move your cursor to the area you wish to brush out and click your mouse. The color you have previously picked up is now dropped in, replacing an undesirable color or area. Repeat by moving your mouse and clicking, continuing to replace the color until you reach the desired effect.



Brush

This same action can be used to paint in a montage from the same or another active photo window. To create a montage by selecting an element from one picture and moving it to another, follow the same procedure as for correcting a blemish. If you are planning on moving a large element of a photo, use a larger brush. First, select your desired brush size. Next, select the Clone Stamp tool and collect the pixels located in your target area by clicking and holding the mouse while pressing the Option/Alt key. Then place them in another area of the same photo or in another active photo window by holding down your mouse button and “painting” in the image.

Adobe Photoshop and Adobe Photoshop Elements offer many creative options for enhancing and editing your photos. To get the most from these applications, we recommend spending some time looking at the various features available and experimenting with them. You can also utilize the Help function to search by subject for useful instructions and tips to better use the software.

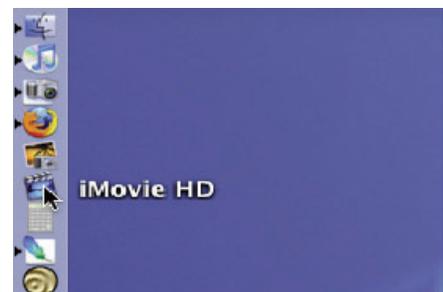
## Organizing Your Computer to Work: File Management in iMovie

The KQED DSI used software created by Apple to edit digital stories. The iLife Suite is a collection of software applications developed by Apple to work seamlessly with each other to manage, enhance and help you create your multimedia collections and projects. Although the newest machines are shipping with the updated iLife 08 Suite, we prefer to use the 06 version of iMovie because of a radically redesigned interface that is much less intuitive. We do use the other applications in the newer iLife 08 Suite. You can use either. There is a free download of iMovie 06 at [www.apple.com/support/downloads/imovieHD6.html](http://www.apple.com/support/downloads/imovieHD6.html). The iLife 06 Suite contains: iMovie HD, a video editing application and the primary tool used by KQED workshops to edit a digital story; iPhoto, a photograph organization tool; iDVD, for creating and burning DVDs; iTunes, for managing and playing your music collection; Garage Band, a sound production application that allows you to score your own arrangements; and iWeb, an innovative application that makes it easy to create custom websites.

KQED teaches iMovie as its video editing solution for several reasons. The KQED DSI computer lab is taught on the Mac platform and iMovie was developed for Mac using its own operating system. iMovie's low cost is also a determining factor—it is included free with all new Mac purchases and is an intuitive, easy-to-learn program that is fun to use and provides results with very high production values.



Dock



iMovie HD

Let's take a look at the structure and features of iMovie HD. In order to work efficiently, you should understand how to open or "launch" the software, how to name your work, how to import your prepared materials, and how to resume a project if you stop working for a while.

By default, with the Mac OSX operating system all of the iLife 06 Suite application icons are located in the dock of your computer. To launch iMovie HD, double-click the iMovie icon, which resembles a film clapboard for iMovie 06 and a star for iMovie 08.



Welcome Screen

When you open iMovie HD, it will open up the last project you were working on. If you have not yet started a project, it will open a welcome screen. This welcome screen appears first and will prompt you to Create a New Project, Open an Existing Project or Make a Magic Movie. The welcome screen also offers the option to Quit. You will be starting a new project, so select Create a New Project. A standard Save dialog box will prompt you to name your project and to save it to a desired location on your computer. For easy recognition, we recommend you title your project using your first and last names (Project: LeslieRule) and save it to your desktop. Your new iMovie HD project file is represented by a clapboard/star icon.

The next time you open iMovie, the program will automatically open the most recently named project. This allows you to continuing working where you left off. If you prefer to open another iMovie file, choose File>Open from the pull-down menu. If you wish to return to the welcome screen, choose File>Close Window (you will be prompted to save any open work) and the screen will return to the iMovie HD welcome screen.

A significant change from previous versions of iMovie is the look of the Clips pane. A new pane is the Editing pane, which contains tabs for Titles, Transitions, Video FX and the new Audio FX. Also new, the Media pane now

combines access to your Photo and Audio elements. Previously they were separate panes. The functionality remains the same—you can still access your iTunes and iPhoto libraries—but they are now within the Media pane.

Another significant change in iMovie HD from previous versions is the manner in which iMovie imports and manages media assets. Traditional methods of importing media are still available; you can still import media by choosing **File>Import**, navigating to a target file or folder, and choosing **Open**. iMovie will import the material selected. Another option for importing is to drag and drop acceptable format files directly from a folder onto the Clip pane. Keep in mind that iMovie HD does not recognize .wma files and will not import them.



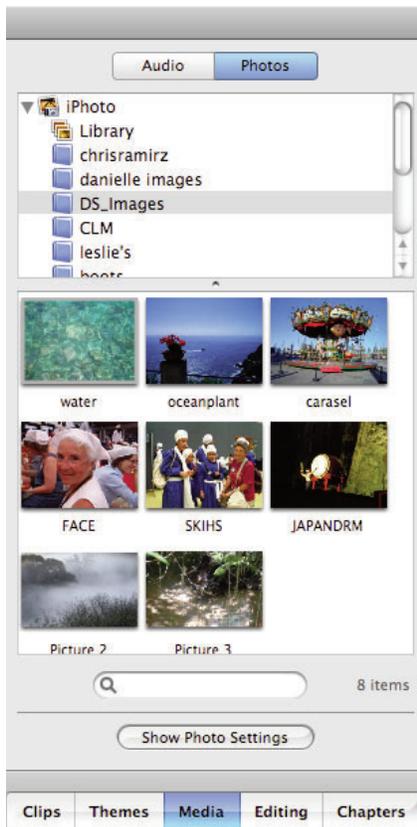
Media Pane

Although those methods do work, the preferred manner of managing your work is via the new Media pane. By preparing all of your images in advance, saving to a folder on the desktop and then moving the folder of final images into your iPhotos library, you will be able to easily access your images via the Media pane by using the Photos tab. Move your folder of images into iPhotos by selecting the target folder and dragging it directly onto the iPhoto icon in the dock. iPhoto will automatically import all of your images. Once the import process is complete, you can order your images as you like by creating albums. First Shift+Click to select all of the desired images you want to place in order, then click the + button at the far lower left of the iPhotos window and create a new album. The images you have selected will now be placed into the newly named album.

The same approach—ordering your files in advance—is advised for audio assets. Prepare a folder on your desktop to contain your audio files, both your voiceover narration and your sound tracks. Move this file into your iTunes

library. Then you are able to access these files from the Audio tab of the Media pane. To move a folder from the desktop into iTunes, simply click the folder and drag it onto the iTunes icon in the dock. iTunes will automatically import the contents of the folder into the library. Create new playlists, if desired, by clicking the + button located in the lower-left corner of the iTunes window.

iMovie HD has added these intuitive methods of working in order to make the production process more integrated among the suite of iLife tools. Used in the manner suggested, you will find working with iMovie a fun and easy way to give life to the stories you plan to create.



**Creating the Piece**

Hardware and Software:  
Getting Your Gear Together

Editing Video

Editing Audio

## Hardware and Software: Getting Your Gear Together

Besides exceptional stories, one outcome of students taking a KQED Digital Storytelling Workshop is the desire to create more digital stories on their own equipment! Some may already have a computer and need only to add functionality, whereas others may not have a computer and will need to start from scratch. And although computers continue to become more affordable and accessible, most people still consider them to be a major purchase. Therefore, it is important to know exactly which equipment is necessary for creating digital stories.

### HARDWARE

“Hardware” refers to the actual computer you will use to create the work. It also encompasses other important items, including scanners and printers. As mentioned in Chapter 2, it is essential to use a computer with enough processing power and hard-drive storage space so you do not become frustrated by slow processing time or run out of space to contain all your materials.

When it comes to computer hardware, “the bigger, the better” is generally true. The larger the processor, the faster the work can be done; the bigger the hard-drive storage space, the more data it can store for you to access. Luckily, many formats of digital storytelling, including short movies, do not require the fastest or most powerful machine. And although Mac and PC operating systems are becoming increasingly more similar, we recommend and use Apple products in our lab.

Apple released its first personal computer in 1984 with the expectation of its being a personal computer for all of us. Its operating system was intuitive, and emphasis was less on the computer as a business machine and more on its capabilities as a desktop publishing machine. Apple began to focus on its computers’ multimedia production capabilities shortly after they were introduced. Early pioneers and creators of digital stories preferred using Mac machines to Windows PCs for this reason. For the first time, nonprofessional producers had access to machines capable of multimedia and video production. Through the years, Apple has continued to place a priority on the multimedia and video production functionality of its machines. Today, the ease of use direct from the box allows even first-timers to achieve remarkable results right from the start.

### SOFTWARE

As interest in digital storytelling and consumer media expands, so do the software application options available to help you tell your story. We use—and

teach you how to use—a set of software tools that have become the standard for digital storytelling, but other applications exist that you may wish to consider, depending on your budget and your digital storytelling goals.

#### RECOMMENDATIONS FOR MACINTOSH AND WINDOWS – IMAGE EDITING

The image editing software of choice is the Adobe Photoshop series, created by Adobe Systems Inc. Adobe typically develops software that is identical for both PC and Mac users. We recommend Photoshop Elements for beginners and photography enthusiasts. Considered to be the “little brother” to the professional-level Photoshop, Elements provides a wide range of useful editing tools as well as automated **Quick Fix** options. The cost of Photoshop Elements for both Mac and Windows platforms is approximately \$80. The professional-level Photoshop moves up the scale in capability, power and price. Photoshop is the professional standard for graphic, Web and video designers as well as for professional photographers. Photoshop is available in several bundled professional Creative Suites, with prices beginning at about \$650.

#### RECOMMENDATIONS FOR MACINTOSH – VIDEO EDITING

For Mac computer users, the video editing software of choice for the KQED/DSI workshops is iMovie 06. As mentioned in Chapter 2, iMovie was developed by Apple as part of the iLife Suite, a set of integrated software tools for your multimedia lifestyle. iLife is included free with the purchase of any new Mac computer. The suite can also be purchased for about \$80 at Apple retail stores and online at [www.apple.com](http://www.apple.com).

In addition to iMovie, Apple has also created Final Cut Pro Express HD and Final Cut Pro 6 for digital video production. Final Cut Pro Express HD is designed for a wide range of users, from beginners to experienced video editors. Its price of approximately \$300 is obviously more than pocket change, but it’s a good investment for the user who is serious about learning to edit digital video. Professional digital video editors consider the more advanced Final Cut Pro 6 to be a standard in the industry. It is a powerful tool and comes bundled as part of the Apple Final Cut Studio 2, which sells for about \$1,300.



iMovie HD

We also extend a warm “welcome back” to Adobe Premiere Pro CS3 for the Mac. Absent from the Mac platform (and also from the PC platform) for several

years, Premiere Pro returns as a start-to-finish solution for efficient and professional video production as well as for seamlessly integrating media from the entire Adobe family of products. Adobe Premiere Pro prices begin at around \$800.



#### RECOMMENDATIONS FOR WINDOWS – VIDEO EDITING

The Windows XP operating system includes a free movie-editing application called Microsoft Movie Maker. It is intended for beginners and home video enthusiasts and is well suited to teaching those who are new to digital storytelling the basic concepts of editing and storyboarding.

Also, Adobe has created tiered-level video editing software for Windows computers similar to Photoshop Elements and Photoshop: Adobe Premier Elements is suitable for beginners and home video enthusiasts, and Adobe Premiere Pro is suitable for professionals.

Adobe Premiere Elements offers ease of use for home video editing projects, and at about \$100, it's priced for the beginner and enthusiast. As noted above in the Mac section, Adobe Premiere Pro is once again available as a cross-platform product for the professional video editor. Premiere Pro offers seamless integration of media among the entire family of Adobe products. Premiere Pro is available for Windows and Mac for about \$1300.

## Editing Video

By this point in the DSI workshop, you should have finished digitizing all of the still photographs, artwork and video you plan to use in your piece and all image editing and enhancements of your photographs and artwork. You should also have completed the final draft of your story and recorded your script in Sound Studio or Audacity.

We will now move to the creating the final story by editing the video and audio together using Microsoft Movie Maker on the PC or iMovie 06 on the Mac.

If you have never edited video before, the concept is relatively simple. Even if you have not consciously thought about it, you have been exposed to editing just by watching television and feature films. Editing video on a computer is the process of combining the materials, or assets, you have available as digital files into a cohesive piece that plays from beginning to end.

Using a digital (nonlinear) editing program allows you to access your material instantly and repeatedly. The video editing process calls for making a number of decisions around aesthetics, including clip length and timing, transitions between clips, special video effects, titles, and audio and voiceover balance. The next time you watch a movie, commercial or television program, pay attention to the length of a clip, or scene, before a change is made. Watch how the transition from one image to the next is made: Is it a straight “cut” or does it dissolve from one clip into the next? By observing how various transitions are utilized, you will become aware of how different aesthetics contribute to a particular mood or feel. Also pay attention to the effect music has on the piece and how a change of music can often elicit an emotion.

### EDITING IN iMOVIE HD 06

Tip: Working in iMovie will require as much available space on your computer screen as possible. Move the dock to the left side of your screen for maximum working space.

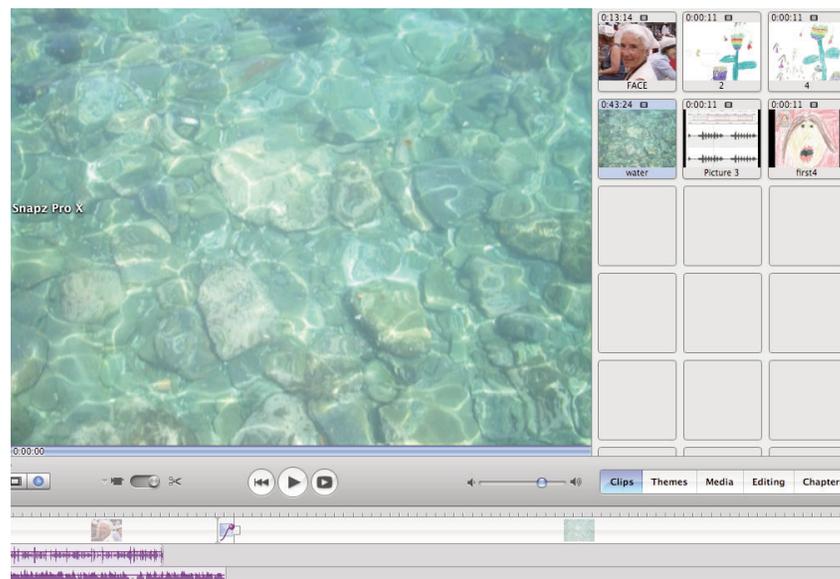
Whenever you begin to work with a new piece of software, it is good practice to review all of the pull-down menus to see what functions are available as well as review the interface. If you have used an earlier version of iMovie, you will see that many new features have been added in iMovie HD 06 and that accessing material may be from a different pane or location.

A series of **Pane buttons**, located on the **Option bar**, change the pane to various tools that allow you to access elements you can add to your project. The Pane buttons include: **Clips**; **Themes**; **Media**, which contains the **Audio** and **Photo** panes, as did previous iMovie versions; and **Editing**, which contains **Titles**, **Transitions**, **Video FX** and **Audio FX**, and **Chapters**. We will discuss the functionality of these Pane buttons later in this chapter.



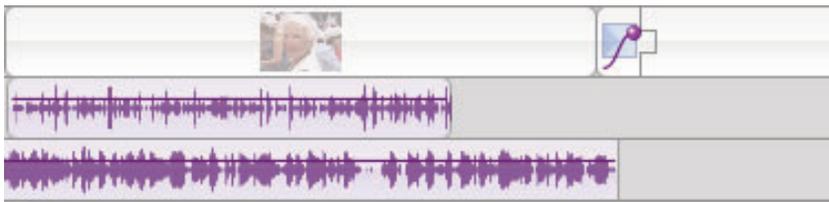
Similar to iMovie's previous versions, iMovie 06 has an interface structure that comprises the **Timeline**, the **Monitor** and a series of Panes that provide contextual tools when selected. Let's take a look at the functionality of each interface component.

The **Clips pane** is the default pane when iMovie is launched. It is where all of your images that are imported using the import function under the File menu (photos, artwork and video clips) are stored for use in your movie. (Note that we recommend iPhoto to import photos.) Each image you import into iMovie from the Import tab drops into a square in the Clips pane, and you can scroll up and down through the clips to locate a desired image. Think of this area as a shelf in a kitchen cabinet—each time you need an ingredient (an image), you return to the shelf to get it.



The **Monitor** is the area in which all clips can be viewed and played back. Click the Play button (forward arrow) to view the material assembled in the Timeline. Click the double-left arrow to return to the beginning of the Timeline. Click the arrow within a box to view your movie full-screen on your desktop. Notice that as your movie plays, a vertical line, called a **Playhead**, progresses from left to right through the Timeline. The position of the Playhead correlates with the video and audio located in the Timeline. Use the downward-facing arrow button at the lower-left corner of the Monitor to scrub, or move through, your movie by controlling the Playhead along the Timeline.

The **Timeline** is where you arrange your material in the desired order and where you add the music, narration, transitions and special effects to your movie. The Timeline has three tracks available in which to work. The top track is where the visual clips are assembled; the lower two are for audio. For our needs, we will use one audio track for the voiceover and the other for sound track and special effects. The Timeline also has two “views” available in which to work. The **Clip view** (represented by a film clip icon in the Options bar) allows you to see your movie as it is arranged clip by clip, and it allows you to change the order of the clips very easily. The **Timeline view** (represented by a clock icon in the Option bar) allows you to see the duration time of each of your placed media and transitions. You can adjust the Zoom setting in the Timeline view to see your work in greater or less detail. Both the Clip and the Timeline views are useful; once you begin working in iMovie, you will find it is necessary to toggle back and forth between the two modes to build your piece.



Timeline Tracks

Let's take a closer look at the functions available through the Clips pane buttons.

### Clips Pane

The Clips pane is where all of your images (video clips, photos, artwork) are imported into iMovie. Preview the materials located in the Clips pane on the Monitor by clicking the clip. If the clip is a video clip, press the Monitor's Play

button to preview the video. Arrange your clips into any desired order in the Clips pane by dragging and dropping them. You can rename the clip by double-clicking it and changing the information in the Clip Info dialog box. Identifying your images with descriptive names can be very helpful when it comes time to arrange them in the Timeline. Begin building your story by selecting desired images (clips) from the Clips pane and dragging them into the Timeline, either in the Timeline or the Clip view mode. Repeat the process to place still photograph clips and video clips. Once placed in the Timeline, still photographs are considered video, and you are able to adjust the duration (length of time) each clip will play. To adjust the duration of a clip, double-click the image in the Timeline and change the Duration setting. Remember that video editing operates using the measurement of 30 frames per second. Therefore, a duration of 3 seconds will read 03:00.

### **Understanding How Time Is Measured in Digital Video**

When you begin editing with images and video clips, it is necessary to understand how video is measured in terms of time. Video is measured in a unit of time called a frame. There are 30 frames of video processed for each second of video; conversely, each frame is 1/30 of a second. Video time is written with the following structure: hours:minutes:seconds:frames. A timecode written as 01:30:12:10 is read as: one hour, 30 minutes, 12 seconds and 10 frames. Familiarize yourself with this format because all indicators of time in video editing, including in iMovie, are given in this format.

### **Themes Pane**

Themes are predesigned animations that are a unique and fun addition to iMovie 06. You access Themes via the Themes pane. Themes allow you to add images, text and video to customize a theme-related, stand-alone movie that serves to introduce your movie, to segue to your movie and to provide credits for your movie. When completed, these animations can be added to a Timeline and will play and behave in the same manner as any other clip. The Themes available in iMovie 06 include Travel, Road-Trip, Pass Through, Reflection – White, and Reflection – Black.



When you have selected a Theme, you are presented with a variety of Theme Elements. Use the scroll bar on the right side of the Theme Elements window to see the available options. The Theme Elements include Open, Chapter, Lower

Third, Bumper 1, Bumper 2 and two versions of Credits. Choose a Theme Element by clicking it, and it will load in the preview monitor.

As the Theme animates, gray areas appear in the animated sequence. These gray spaces are referred to as Drop Zones, and you can drag and drop images and video clips from the Clips pane, the Photos area of the Media pane and the Timeline into the spaces provided in the Drop Zone window. You can change the areas labeled Titles by typing a new title in the Themes pane. Render your customized theme by clicking the Apply button in the Themes pane. The stand-alone Theme animated movie will now be placed, as its own clip, in your Timeline.

#### Media Pane (Audio and Photos Combined)

Accessing Audio and Photo assets is now available in iMovie 06 from one location, the Media pane. The Audio portion of the pane contains sound effects available from three licensed libraries: Standard Sound Effects, Skywalker Sound Effects and iLife Sound Effects. You can also access songs created in GarageBand (Note: Be sure to select Save an iLife Preview when saving your song in GarageBand in order to be able to access it in iMovie). The Audio tab also provides access to your iTunes library, including podcasts and playlists.

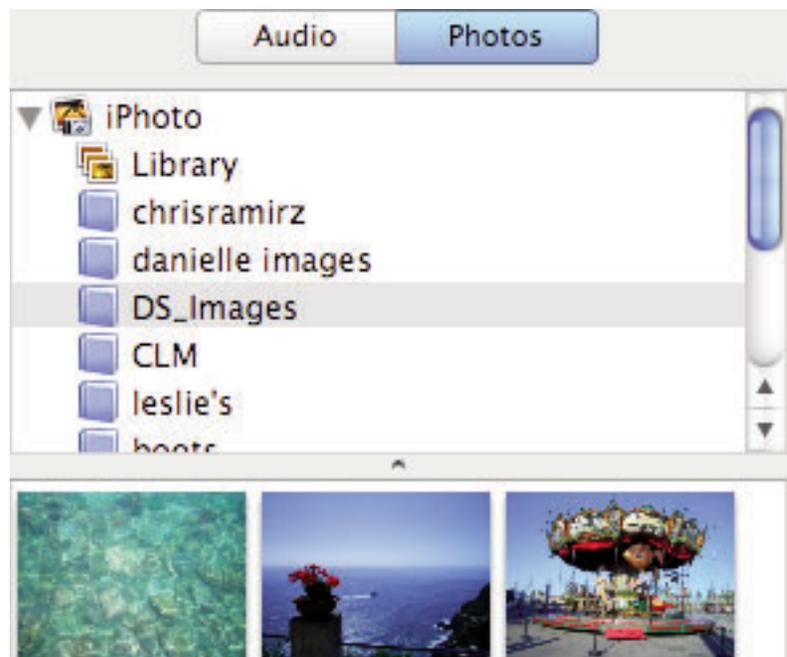


Preview an audio selection by clicking it in the Media pane. When you are ready to use an audio asset, click and drag the selection from the Media pane to the Timeline. iMovie will import the music track and place it where the Playhead is located. When the track has been successfully imported, a purple audio track (visualized in waveform format) will be visible directly beneath the video track. You can now select and move the audio track forward or backward in the Timeline to align it with your movie. As you will likely experience, having a sound track in place may require adjusting the duration of transitions and titles in order to synchronize them to the music.

We recommend that in building your digital story you use the top-level audio track for your voiceover narration and the lower-level audio track for combined sound track and sound effects.

There are other ways to import a sound track into iMovie if you do not have an iTunes library. We'll cover these as well as other sound-related issues—including how to record a narration in iMovie using the built-in microphone in the Audio pane—later in this chapter.

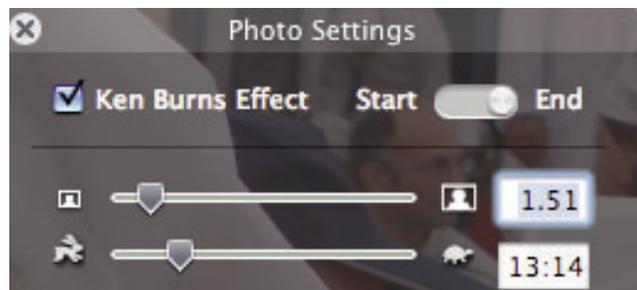
The **Photos** tab of the Media pane allows you to seamlessly access all of the images stored in your iPhotos library. Select images from the library, last roll or



any of the albums that have been created in iPhoto. As images from collections appear in the Media pane, simply click to select and preview them in the Monitor.

You'll notice that the images you are previewing in the Monitor are moving. In iMovie, this motion of a still image (whether zooming in or out or panning across) is called the **Ken Burns Effect**. This is named for Ken Burns, the man who popularized this treatment in his inspired documentary film projects in order to add a sense of motion to still photographs. Applying motion to still images is also at the heart of digital storytelling, as it is often these older, pre-digital era photos that give so much meaning and authenticity to the stories we tell of our past. We put motion on these images not only to keep the feeling of movement and flow consistent throughout the piece, but also to draw attention to a specific item or person within the image—such as zooming in on the face of a person who has been referenced in the narrative.

To use the Ken Burns effect, you need to access the **Photo Settings window** that appeared when the image was being previewed. If the window does not appear automatically, click the **Show Photo Settings** button. First set the amount of time you want the image to appear in the story by dragging the Duration slider from rabbit to turtle (fast to slow). The maximum amount of time available for a still image is 60 seconds.



Next, set the desired motion, first by clicking the box marked Ken Burns Effect to activate the Effect's controls, then by moving the **Start/End toggle** into the Start position. Next move the **Zoom slider** to where you want the zoom to begin. For example, you may want to start with the camera pulled all the way out, allowing you to view the entire image. Now move the Start/End toggle button to the Stop position and use the **Hand tool** to place the image at its final destination point for the zoom.

Check the results of your setting by clicking the Monitor's **Preview** button. If you'd like to see how the motion looks in reverse, click the **Reverse** button at the bottom of the Photos Settings window. When you are satisfied with the movement settings, drag the image from the Photos pane into the Timeline; alternatively, you can click Apply from the Ken Burns window to add the image to the Timeline.

The Ken Burns Effect is a great tool for digital storytelling. And although understanding how the tool works may take some practice and experimentation, we encourage you to do this both to learn how to use the tool and to become familiar with what is possible using zooming and panning techniques.

If you prefer to have a nonmoving version of your image, simply uncheck the Ken Burns Effect box. You can still change the duration of the image using the Duration slider, and when you are happy with your settings, add the image to the Timeline by clicking Apply or by dragging it into the Timeline from the Photo pane.

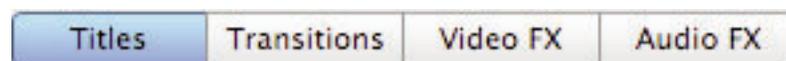
### **Editing Pane**

New in iMovie 06, the **Editing pane** provides easy, all-in-one-location access to **Titles, Transitions, Video Effects** and **Audio Effects**. Each tab of the Editing pane is reviewed in further detail in the paragraphs that follow.

#### *Titles*

Using text in your story, in the form of titles and/or credits, is an ideal way to add information and dimension. Text can punctuate your script, and in the absence of a spoken reference, it can serve as supplemental information. The use of credits, particularly crediting yourself as creator of this production, is also very important. You worked hard on this story—be sure to give yourself credit! Also be sure to credit any materials you used in your story that you did not create, such as photographs, video and music.

To add a title to your digital story, click the **Titles** tab in the Editing pane. The **Titles pane** will appear, offering a variety of title styles. Some title styles are grouped with related options, which are available by clicking the downward arrow located to the left of the title style. When you select a title style, a full-



screen preview will appear in the Monitor. When you have found a style you like, edit the title text, including selecting the font and its color and size as well as adding or subtracting lines for credits and changing the speed and pause timing of the title.

Titles tend to look best when they are added over a solid background such as white or black or over a still photograph. Check the **Over Black** box to add your title over black. To add a title over a still image, select the desired image in the Timeline; the selected image will appear in the Monitor, allowing you to visualize how the title style and settings will look.

Adjust the speed at which the title moves into place by using the **Speed slider**. Adjust the duration of time the title remains in place by using the **Pause slider**. Keep in mind that the amount of time the title will play is the sum total of the Speed plus the Pause settings, and the maximum amount of time is based upon the duration of the clip as set in the Timeline.

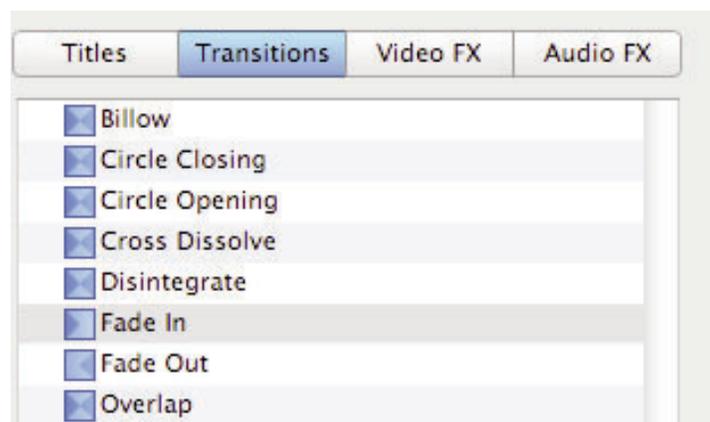


When you have completed making your edits and timing adjustments, add your title to the Timeline by clicking the **Add** button in the lower right corner of the Titles pane. Once the title has been added to the Timeline, you can make changes from the Titles pane and add them to the existing title by selecting the target clip in the Timeline and then clicking the Update button in the Titles pane. There are many fun and professional-looking styles, so be sure to examine each to find one that suits your style and story. Choose title styles that will contribute to the feel of your story, rather than distract from it.

### *Transitions*

The next tab of the Editing pane gives you access to the **Transitions pane**. Transitions are the visual effects that occur as one clip or image ends and another begins. In television programming, transitions go mostly unnoticed, with a straight “cut” being the standard method of moving from one image to the next. Feature and documentary films use transitions more creatively, often with fade-ins (transitioning from black to image or video) and fade-outs (moving from image or video to black). Transitions can establish feel and emotion and can

also indicate a passage of time. For example, some action films use a radial or clock wipe to indicate action, taking place in another location or time. We lightheartedly refer to this as the “meanwhile, back at the ranch” transition. A cross-dissolve is a transition in which one image slowly fades out as the next image fades in over a set duration of time. The cross-dissolve is a visually elegant transition, particularly when dissolving between still photographs, and it is a very popular and appropriate transition for digital storytelling.



The process of adding transitions to your digital story is a satisfying and enjoyable part of the production process. Finally, the emotional attitude of your story begins to reveal itself, and you can see how

the arrangement of music, narration, images and transitions all work together to create a powerful result. Be sure to examine all of the transitions for style and effect; we suggest using **Fade In**, **Fade Out**, **Cross-Dissolve**, **Overlap**, **Wash In** and **Wash Out**.

Working in the Clips view is the most efficient way of working with Transitions. To add a transition, click the Transitions tab at the top of the Editing pane. Before selecting a transition from the pane, select a location (two clips located next to each other) in the Timeline where you would like to place the transition. Select a transition from the Transitions pane, and a preview of what the transition looks like—using the chosen clips—will play in the Monitor. One of the Transitions options available in iMovie 06 is **Directional**, which enables you to adjust the direction in which the transition moves. A directional transition will have a four-arrow button to allow you to control the direction.

You may also adjust the speed, or how long the transition will take, by adjusting the **Speed slider**; be aware that this is also the amount of time the total duration of your movie will be cut. A slightly frustrating aspect to adding transitions

to your story in iMovie is that a transition actually “steals” time from your story. This is because a transition acquires its time duration by playing two clips at once, depending on the speed of the transition. Keep this in mind when adding transitions and be aware that a reworking of clip duration times may be necessary. (Reset the duration of a clip by double-clicking the clip and adjusting the time duration field.)

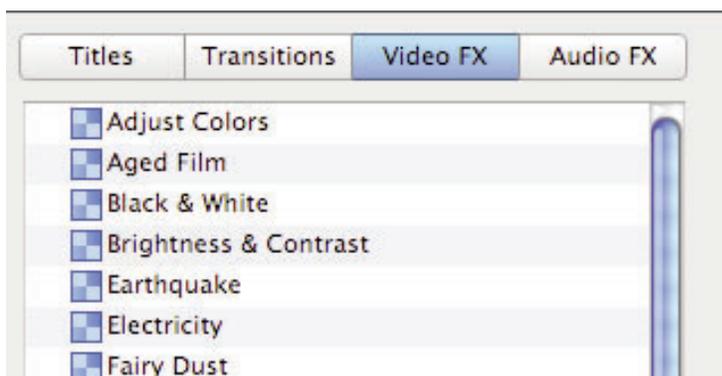
When you are satisfied with the look and speed of the transition, press **Add** in the Transitions pane to add the transition to your Timeline. A red bar will appear briefly under the Transitions icon in the Timeline, indicating the effect is being rendered.

A second method of adding a transition to your story is to click and drag a transition from the Transitions pane and place it between two clips. The transition will render immediately; however, a preview will not be displayed.

Delete a transition from your project by clicking the transition in the Timeline and pressing the **Delete** key; notice that after deleting a transition, time taken away from the clip duration is regained. Change the type of transition in place by selecting the clip in the Timeline and choosing an alternative transition; click **Update** in the Transitions pane to make the change.

#### *Video Effects*

**Video FX**, which brings up various options for video effects, is the next tab available in the Editing pane. Video FX allows you to add even more visual interest to your story beyond the titles and transitions you may have already built in. iMovie 06 provides some very interesting and useful special effects that can add texture and ambience to your story.



To access the Video FX pane, click the Editing pane button and then the Video FX tab located at the top. Similar in appearance to the previous tabs we have

reviewed, an assortment of available video effects appear in the pane. Working from the Clips view in the Timeline, select a target clip to test the effect. When you click an effect, a preview of that effect will play automatically in the Monitor. Note that each effect may have additional controls and settings available; these will be visible in the Video FX pane. Make any desired changes to the appearance of the effect and then set the duration for **Effect In** and **Effect Out**. When you have completed all of the settings, click the **Apply** button in the lower-right corner of the pane to apply the effect to the selected clip in your Timeline. As in the case of adding a transition, a red bar will appear in the lower portion of the clip to indicate the effect is being rendered.

You can add more than one effect to a clip to layer effects. For example, first apply an effect to turn the clip into black and white, then add a second effect, such as Fog. In the case of multiple effects, you may wish to maintain the same Effect In and Effect Out settings to make the effects play in unison on the clip.

When a clip has had a video effect added to it, an icon in the shape of a square box appears on the top border of the clip to the right of the duration time. In the case of multiple effects, a number will appear next to the box to indicate the number of effects that have been applied. To delete an effect, select the box icon and press Delete. The most recently added effect will be the effect deleted.

Video FX does not have an update function, so if you want to change an effect, you must redo it. To make changes to an effect that has been rendered to a clip, delete the effect, reselect the effect, make any desired adjustments and click Apply. You may also apply a single effect to multiple clips by selecting the desired clips in the Timeline. When the effect is applied, it will be applied to all clips that have been selected.

Spend some time reviewing the video effects available to you in iMovie 06. You might be surprised at how effective some of them may be and how they may provide a special visual impact that makes your story come to life.

#### *Audio Effects*

New to iMovie 06 is the addition of **Audio FX**, which brings up various options for audio effects. Use audio effects to alter, enhance or improve the sound of your audio. To access the Audio FX pane, click the Editing pane and then the Audio FX tab. Options for audio effects include: **Graphic EQ, Reverb, Delay, Pitch Changer, Highpass, Lowpass, Bandpass** and **Noise Reducer**. Select an audio track in the Timeline and then select a desired audio effect. Use the controls available for each effect to hear the change it makes to your audio file.

As is true with the other Editing operations, when you have found the audio effect and setting you are happy with, click the Apply button in the Audio FX pane to apply to the selected clip.

### Chapters Pane

The Chapters pane is also new in iMovie 06. This pane allows you to insert the chapter markers for iDVD. When chapter markers are added, iDVD will build a scene selection menu based on where the chapters are placed.

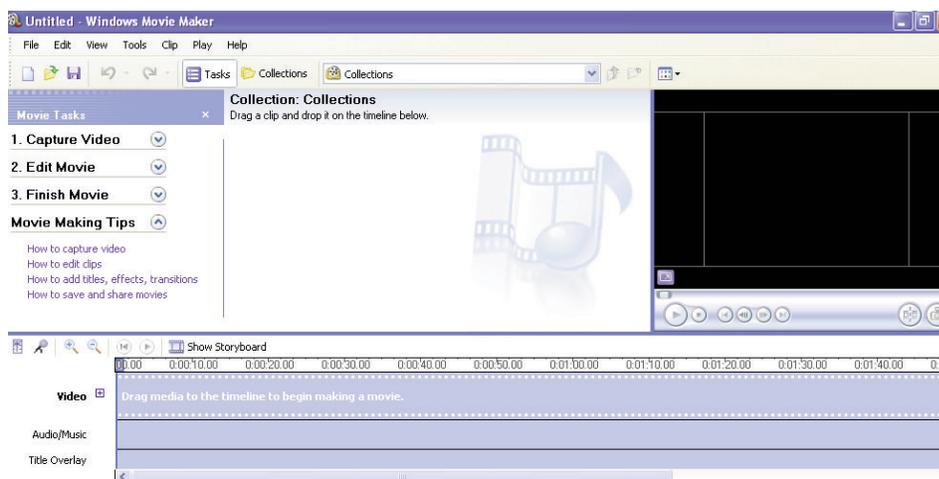
## EDITING IN MICROSOFT MOVIE MAKER

Microsoft Movie Maker 2 is a video editing application that is included in the Windows XP operating system. Movie Maker can import media and capture video as well as arrange images, video and audio on a timeline. It can also add visual interest and depth to your digital storytelling project with the addition of video transitions and effects and title and credit slides.

### Microsoft Movie Maker Interface

As is true with any new software, it is good practice to first familiarize yourself with the interface you will be working with. Movie Maker has an easy-to-understand interface that comprises four main areas: the **Task pane**, the **Collection pane**, the **Timeline/Storyboard** work area and the **Preview Monitor**.

To review the interface, notice the title bar at the topmost edge of the application. Until you have a named project, the title bar will say “Windows Movie Maker.” Once you have a named project in the works, the title bar will show the name of whichever project you are working on. On the right-hand side of the



title bar are the standard Windows buttons for **Minimize**, **Maximize** and **Close**. Below the title bar is the menu bar, which contains pull-down menus for **File**, **Edit**, **Tools**, **Clip**, **Play** and **Help**. Take a moment to look at each pull-down menu and see which functions each offers. Below the menu bar is the toolbar, where icons provide shortcuts for many of the functions found in the pull-down menus. Roll your cursor over each icon and pause (without clicking). You will see what the button is used for. The toolbar also contains buttons for viewing the tasks and collections as well as a drop-down navigation for selecting a collection.



As is true with many software applications, in Movie Maker there are a number of ways to accomplish a given task, and you should use whichever method you are most comfortable with.

On the left side of the application, you will find the **Task pane**, which is where you can access many of the common tasks for creating your story. If the Task pane is not visible, click the **Task** button from the toolbar to activate it. There is



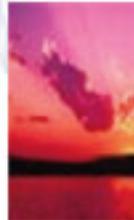
a logical progression to the options available in the Task pane that will assist you in making your movie: **1. Capture Video**, **2. Edit Movie**, and **3. Finish Movie and Movie Making Tips**.

The **Collections pane** is located in the center of the application and is where the contents of collections can be viewed. Click the **Collections** button to view which collections are available. This is also where the **Video Effects** and **Video Transition** collections can

be accessed. When you click the **Video Effects** button or the **Video Transition** button, the contents of the corresponding collection will appear in the Collection pane.

### Collection: New Collection

Drag a clip and drop it on the timeline below.



The **Preview Monitor** is located on the right side of the application and is used to preview the images, video clips, video effects, transitions and timeline of the story you are creating. Adjust the size of the Monitor by hovering your cursor over its left edge until it turns into a two-sided arrow. Then click, hold and drag the edge to increase or decrease the size of the Monitor. Select any piece of media you wish to preview in the Monitor, either the Collection pane or from the Timeline, by clicking it once. Use either the control buttons at the bottom of the monitor or the **Play** pull-down menu to start playing your selection, to stop it or to move it forward or backward. Clicking a selection in the Timeline will play the timeline from the selected point forward. To view a selection in full-screen mode, click the Play button, then click the small blue button with a pointed arrow just above the Play button. Return to the normal view by clicking the Escape key.

The **Timeline/Storyboard** work area is located at the bottom of the application. This is where all of the various media elements will be arranged and edited together. Depending on which view you want to work in, you can click the appropriate button to toggle between **Show Storyboard** and **Show Timeline**.

Working in the **Storyboard** mode allows you to see the order of images as well as the transitions and special effects that have been added.

Work in the **Timeline** view when you wish to work on the timing of the images in your project. Expand the **Video track** by clicking the + sign to the right of the word “Video.” This will allow the **Transition track** and the **Audio track** associated with the **Video track** to be visible. Use your cursor to manually move the Play indicator from left to right or press the space bar to begin playing. Click the **Rewind Timeline** button to return the Play indicator to the beginning. Use the **Zoom In** or **Zoom Out** tools to view the timeline in larger or smaller time views.

The **Timeline** view has additional tracks where **Audio/Music** can be added. This is the track we will use to add voiceover narration to your story and, eventually, to add a mixed track of your combined voiceover and sound track.

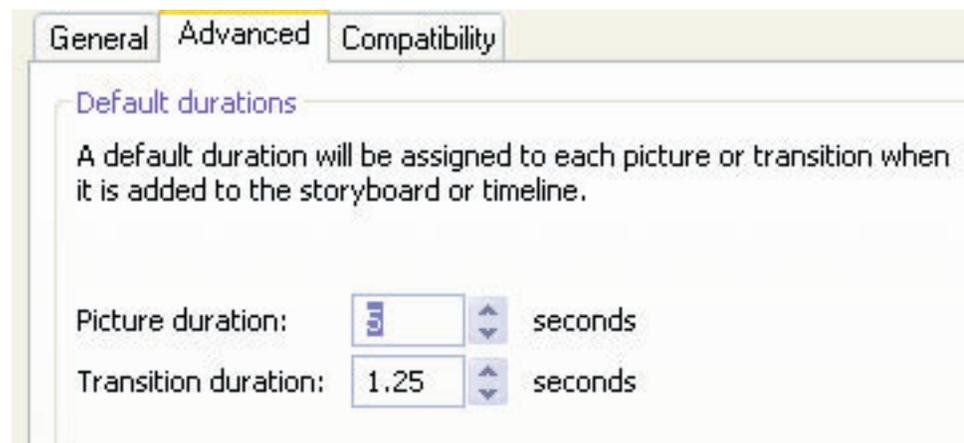
The **Title-overlay track** can be used to superimpose titles directly over clips.

### Understanding How Time Is Measured in Digital Video

When you begin editing with images and video clips, it is necessary to understand how video is measured in terms of time. Video is measured in a unit of time called a frame. There are 30 frames of video processed for each second of video; conversely, each frame of is 1/30 of a second. Video time is read with the following structure: hours:minutes:seconds:frames. A timecode written as 01:30:12:10 is read as: one hour, 30 minutes, 12 seconds and 10 frames. Familiarize yourself with this format because it is how all indicators of time are described in video editing.

### Default Settings

Before beginning a new project, it is a good idea to examine the default settings that are in place for your movie. To check the settings, open **Tools>Options**.



Under the **General** tab you may wish to enter your name as the project default author. This tab also has a button to **Reset All Defaults**, near the bottom of the page. Under the **Advanced** tab you will see values for **Picture Duration** and **Transition Duration**. Set the Picture Duration to 5 seconds and the Transition Duration to 2 seconds; they can be adjusted during the editing process if desired. Next, select the correct **Video Format** for your country, either NTSC (for North America) or PAL (for Europe and Asia). Finally select the **Aspect Ratio** you desire; for this workshop, we will select a 4:3 ratio. When you have completed making your default settings, click OK.

### **Begin a Project**

We refer to the product we will create in Movie Maker as a project. A project contains all of the arranged elements that we have prepared and will import into Movie Maker for use within the movie. This includes video clips, photos and images, voiceover, and a sound track. Every edit you make to your project, whether deletion, addition or change, should be saved, and when the project file reaches its final form, you will save it as a self-playing movie.

When you begin a project in Movie Maker, it is important for you understand that Movie Maker, as a nonlinear editing program, accesses media from a location in its directory. Therefore, it is critical to keep your media in the same directory location throughout the project so Movie Maker can access and display the media correctly.

Begin a new project by selecting **File>New Project**. Name your project, then choose **File>Save Project As** and save it within your digital storytelling materials folder (see “Preparing Visuals” in Chapter 2). Notice that Movie Maker assigns the extension .mswmm to the project file.

### **Create a Collection**

Now we will create a **Collection** in which all of our digital storytelling materials will be organized together into one group for easy access in Movie Maker. To create a new collection, activate the **Collection pane**. Click the **Collection** button in the toolbar to do this. Next, select **New Collections** from the **Tools** pull-down menu; you will see a new collection appear on the left side of the pane. Name the new collection with a name that will reflect your project and press **Enter**. Now we will import the digital storytelling materials into this new collection.

From the **Movie Tasks** pane on the left-hand side, select **Import Pictures** from the **1. Capture Video** section. Navigate to the appropriate folder that contains photos for use in your digital story. Select all of the images inside the directory by clicking the image at the top, holding down the shift key and then clicking the last image. Click the **Import** button on the right side of the box. Your final images will now appear in the Collections area, and you can scroll through them by using the scroll bar on the right side of the Collection pane.

Repeat the import process for audio files: Use **Import Audio File** and navigate to the appropriate directory, then select your voice-over and click **Import**. Your voiceover file will now appear in your collection along with the previously imported photos.



If you have previously digitized a video clip, select **Import Video** from the Task pane and navigate to the directory that contains the file named **Video Clips**. *Note: Before selecting your clip and choosing Import, be sure to uncheck the box labeled **Create clips for video files**. By unchecking this option, we are turning off the automatic clip generator. The video clip will now be imported into a new collection and not into the same collection with the photos and voiceover files. Follow the directions for moving a clip from a new collection into your main media collection in the next section.*

#### *Capture Video From Digital Video Camera Using Movie Maker*

The first step in having Movie Maker capture video from your digital video camera is to connect your camera to your computer using the correct cable, usually a Firewire or USB cable. Next, set your camera on **Play** mode. Then select the Capture from video device option from the **Movie Tasks** pane. The **Video Capture Wizard** should now appear, with your camera recognized as an available device.

Select the correct **Audio device** to transfer the audio along with the video—most likely the correct option will be **Capture audio**—using the same USB cable as the video. You may wish to review the video configuration settings before proceeding to the next step. To do this, click the **Configure...** button on the right side of the box. Click the **Video Settings** button and review the options to change **Frame rate**, **Color space** and **Output size**. We recommend the default output size of 320 x 240, as it is the most efficient resolution size for digital storytelling projects. Click OK to accept the options. Click **Next** on the Video Capture Wizard box to continue.

Enter a file name for your captured video. All video captured during this session will receive this name followed by a number. Choose a place to save your captured video—we recommend saving to the folder previously created on C:Drive, entitled **Video Clips**. The next dialog box will display the setting details you have chosen for capturing video; click to move to the next step when you are happy with the settings.

With your camera in the Play mode, begin capturing video by clicking the **Start Capture** button. Stop the capture when you reach the end of what you wish to capture (remember to also stop your camera from playing). Click the **Finish** button; Movie Maker will generate multiple clips based on scene changes, and the clips will be added to a new collection.

For easier editing, we will move these video clips into our main collection with our other assets, including voiceover and photos. To move the video clips, first select all of the clips in the newly created video clips collection. Next choose **Cut** from the **Edit** menu. Navigate to and open your main media collection from the Collection pull-down menu and choose **Paste** from the **Edit** menu. The video clips should now be included in your main media collection. You can rename these generically numbered video clips now located in your main media collection with more descriptive titles by right-clicking a clip and choosing **Properties**. Rename the clip in the **General** area of the Properties box. Delete the now-empty collection by selecting it and pressing delete.

#### *Create a Rough Edit: Adding Voiceover Narration and Images*

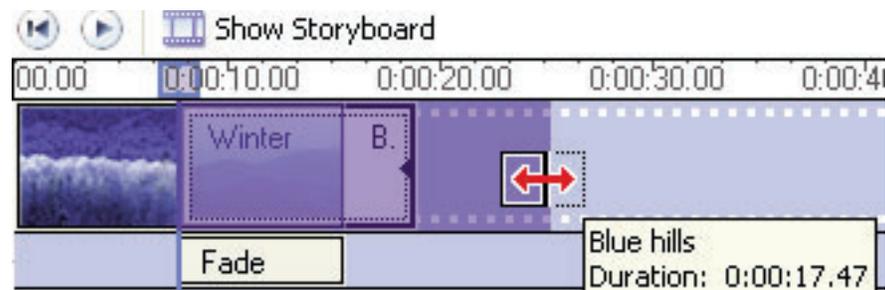
Using your main media collection, you can now begin arranging the photos and video to help visually illustrate your digital story. Since your voiceover narration is the primary focus for the story, we will first place this and build the images around it. With the work area in the Timeline mode, click the voice-over file,

located in the main collection, and drag and drop it into the Audio/Music track; the file should drop easily into place. Click to select the voiceover clip and drag it to the far left, so it is placed at the beginning of the timeline. Be sure to expand the clip to its full length in the track. Rewind the Timeline to the beginning and press Play; listen to your voiceover from beginning to end to ensure the entire clip has been expanded.

Because Movie Maker provides only one track for Audio/Music, we will eventually need to remix your voiceover file with your sound track file and reimport into the Timeline. But for now, let's work to arrange your visuals to your story.

Select a photo and drag it into the Video track of the Timeline. You will see that the duration of the photo on the Timeline is 5 seconds, as we have previously set this as the default duration for photos. Because Movie Maker references—that is, uses instances of your media files—your images and videos, you can make changes to them within the timeline and not affect the original. To change the length of time the photo appears on screen, click the photo within the Timeline and drag the edge of the clip to make it shorter or longer, depending on your preference. As you increase or decrease the duration of the clip, Movie Maker will indicate the new duration length.

Add a video clip to the Timeline using the same drag and drop process. You will see the video clip appear in the Video track and the associated audio will appear in the Audio track when the Video track is expanded. Since a video clip is a finite piece of footage, you cannot increase the duration of the clip as in the



case of a still photo, but you can decrease the duration of the clip by clicking it in the Timeline and dragging either end in; watch the clip in the Preview Monitor to visualize the exact location of where you want the clip to be trimmed. And again, because Movie Maker is referencing the video, trimming a clip does not

change the original clip. Keep in mind that the audio associated with the video will also be trimmed. If you wish to hear the associated audio in your story, leave the audio as it is. If you do not wish to hear the audio associated with the video, click the audio portion of the clip in the Audio track and mute the clip by choosing **Mute** from the right-click menu.

Remove an unwanted clip from the Timeline by selecting it and pressing Delete or by right-clicking it and choosing Delete from the right-click menu. Deleting a clip or photo from the Timeline does not delete it from a collection. Move a clip from one location on the Timeline to another by clicking it and dragging it to its new location; a blue vertical bar will appear where your image is relocated.

Create a rough cut of your story by placing all of the desired images and video into their correct location on the timeline. Preview your work as you progress to get a feel for the flow of the story. Remember that because Movie Maker uses references, you are able to use an image or clip multiple times in your Timeline if you wish. Remember to save your project frequently!

#### *Adding Video Transitions*

Once you have placed your images in the desired order on the Timeline, you can finesse the flow of the story by adding video transitions. A video transition

### **Video Transitions**

Drag a video transition and drop it between two video clips on the timeline below.

is an effect that is used to move from one clip to the next. Digital storytelling often uses very simple transitions, such as Fade or Dissolve or even a straight cut to move from one scene to the next; but video transitions can add visual interest to a story, such as using a heart transition in a romance story or a page turn to indicate written correspondence or passage of time. But be careful: Don't overuse novelty transitions that can distract from your story.

Up to now, you have been working in the Collection mode, adding and arranging your media elements in the Timeline. Let's switch now to the **Task** view by clicking the Task button in the toolbar. In the **Edit Movie** section, click **View video transitions** to view a collection of transitions available.

You can add transitions to your story in either the **Timeline view** or the **Storyboard view** of the work area. Let's first look at this process in the Storyboard view. To add a transition between clips, select a transition from the Collection pane and drag to place it in between two images. Press the Play button in the Monitor to preview what the transition looks like. To place a transition in the Timeline view, click and drag a Transition from the Collection area to the Transition track; a blue vertical line will appear in the area where a transition can be placed.

Remember the default duration for a transition has been set to 2 seconds, so if you like the transition but want to adjust the time duration, you can do this by selecting the clip in the Transition track and increase or decrease it by adjusting the duration of the clip.

*Tip: To trim a transition in the Transition track, drag from the side of the leading image. To delete a transition, select the transition in the Timeline view and press delete.*

#### *Adding Video Effects*

By this point in your production, you should have all your images and video placed and into position to support your narration. You should also have video transitions in place. We will now supplement the edit by adding video effects and title graphics.

Movie Maker provides a collection of video effects that can add visual interest and enhance your story. From the Task pane, click **View video effects** to display the Video **Effects Collection**. Scroll through the collection to see which effects are present and which ones might enhance your story. Add video effects to your project by using either the Timeline view or the Storyboard view.

When using the Storyboard view, drag an effect directly onto a clip; you will see a star icon appear in the lower-left corner of the clip. Adding a second effect to the clip will add a second star. Preview how the video effect(s) look in the Monitor. To remove a video from a clip in the Storyboard view, right-click the image to which the effect was added or right-click the effect star. Select **Video Effects** from the contextual menu; the **Add or Remove Video Effects** dialog box will appear. Select an effect to add or remove and click OK.

To add a video effect using the Timeline view, drag a selected effect directly onto a clip in the Video track. Again, a star will appear to indicate an effect is

present. Remove a video effect in the Timeline view in the same manner as in the Storyboard view.

### *Adding Titles and Credits*

Movie Maker provides several useful options for adding titles and credits to your digital story. To access these options, click **Make titles or credits** from the **Edit Movie** section of the Task pane. Here you will find options to:

- Add a title to the beginning of the movie
- Add a title before the selected clip in the timeline
- Add a title on the selected clip in the timeline
- Add a title after the selected clip in the timeline
- Add credits at the end of the movie

## Where do you want to add a title?

Add title at the beginning of the movie.

Click the type of title you would like to add; an **Editing** box opens. If you have selected the option for a title to be added before or after a selected clip, you can now select that desired clip in the Timeline.

Next, enter the title information in the text edit box, then add movement to the title by clicking Change the Title Animation. Choose an animation you like—**Titles with one line** or **Titles with two lines**. Preview your choice in the Monitor. An elegant choice for digital storytelling titles is **Fade In and Out**.

Next click **Change the text font and color** to make any desired changes to text font and background colors. When you are happy with the way your title appears in the Preview Monitor, click **Done, add title to movie**.

Notice that the title you have just created now appears in the position you originally selected, either at the beginning of the movie or before or after a clip selected in the Timeline. If you chose the option to add a title on the selected clip, the title will appear in the **Title Overlay** track of the Timeline in the location

you have selected. Title clips work like other clips, and their duration can be increased or decreased by selecting and trimming the clip. To make changes to a title that has been added to your project, double-click the title in the Timeline, and the **Title Editor** box will appear. To delete a title, select the clip and press the Delete key.

Add final credits at the end of your digital story to acknowledge the people who have helped or contributed to your project. Create a credit the same way you created a title—select **Make title or credits** from the Edit Movie section of the Task pane and select the option to **Add credits at the end of the movie**. The Editing box appears and is configured in cells to help you add credits. Use the top cell to enter the name of your digital story. Tab to the next cell and enter any credit information you wish, such as “Written by:”; tab to the next cell to enter the name of the writer. Continue adding credits as needed by tabbing from cell to cell. To change the manner in which the credits will animate on the screen, select **Change the title animation**. Scroll through the options available under Credits and sample any that appeal to you. Next click the **Change the text font and color** option to change these items. When you have made the changes you want, click **Done, add title to movie**. The credits will now be added to the Timeline as a clip at the end of your project.

#### *Adding a Sound Track*

As we have previously discussed in this chapter, Movie Maker is limited to one Audio/Music track. Although a voiceover may be placed into the track and music added at any vacant spot on the Audio/Music track, it is not possible to have both the voiceover and sound track play together simultaneously.

If you wish to add a sound track to your digital story, it will be necessary to mix your voiceover narration and sound track together into one audio file using Audacity. When this is complete, replace the now married voiceover and sound track into the Audio/Music track.

#### *Adjust All Elements for Timing*

By now, you should have all media elements added into the Timeline, including a combination voiceover and sound track clip. The next step is to review your story in the Timeline view from beginning to end, checking that all the individual elements of media are aligned and timed correctly to your voiceover. Preview

the entire project, making any necessary adjustments, being certain to save changes as you work.

#### *Publish Your Story*

You should now be finished with your digital story, including the editing. It is time to save it to a movie format

Movie Maker provides options to save your digital storytelling project in several formats. These options are listed in the **3. Finish Movie and Movie Making Tips** section of the Task pane. For the purposes of this workshop, we will review the steps to **Save a movie to my computer**.

In **3. Finish Movie and Movie Making Tips**, click **Save to my computer**. The **Save Movie Wizard** dialog box appears, and you will enter a file name for your saved movie. The name of your project will already appear in the file name area, but you can change this if you like. The next option is to choose a location to which you will save your movie; the default location is the **My Videos** folder in the **My Documents** location. Click Next to continue.

In the next page of the Save Movie Wizard, you will see options for the Movie settings. Because we have previously selected **Save to my computer**, the wizard has preselected the **Best quality for playback on my computer** radio button. The settings details and file size of your movie are also indicated at the bottom of the box. Continue by clicking Next; the movie is now being saved, and the wizard will indicate the progress. The Save Movie Wizard will display a new screen indicating the movie has been successfully saved. There is an option here to **Play Movie when I click Finish**. Click Finish to view your movie.

If you like, review the other options for saving your project as a movie. Movie Maker can **Save to CD**, **Send in e-mail**, **Send to the Web** and **Send to DV camera**.

## Editing Audio

Now that you've learned the concept and the tools of editing video using iMovie or Movie Maker, let's consider the role audio plays in your digital story.

Audio is a primary component of any digital story. Being able to hear the words clearly, without static, distortion or interference, is key to engaging your viewers. Adding a sound track to a digital story is one of the really fun and easy parts of creating your piece. Thoughtfully chosen music can add so much texture and emotion. Knowing how to adjust the volume for best levels is also essential. If your sound track is too loud, the narration will be drowned out; if it is too low, it is frustrating and becomes a distraction.

Now we'll talk about the various software programs available for recording audio and provide information on how to add a sound track to your piece. We'll also offer direction on how to adjust the sound levels, effects and narration.

### AUDIO EDITING SOFTWARE OPTIONS AND RECOMMENDATIONS

Whether you want to add audio or create audio for your digital story—or both—may influence your choice of software.

#### **GarageBand**

GarageBand is part of the iLife Suite of tools and has particular appeal for people with an interest in creating their own compositions. Using an original piece of music is desirable because it adds even more of your creativity and personality to the story and avoids any possible copyright issues. We generally do not recommend using GarageBand during the DSI workshop unless you have previous experience generating original music. Teaching the mechanics of GarageBand as part of the digital storytelling process is outside the scope of the class, therefore we recommend working with GarageBand outside class and bringing your completed music piece.



**GarageBand 3**

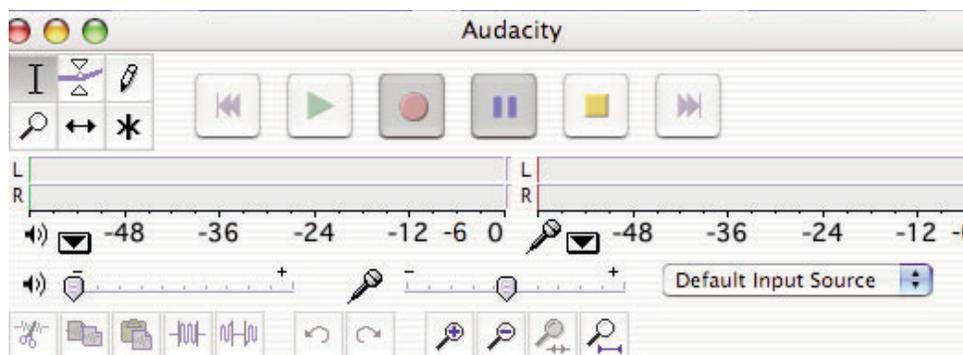
### Sound Studio

If you are working on a Mac to create a digital story, you may choose to use Sound Studio to record and edit your voiceover narration. Sound Studio is a shareware application that interfaces well with iMovie. The controls are easy to use and the software offers a viable waveform graphic that enables you to visualize the volume of your narration. While allowing for volume variations that are inherent to the story—for example, the voices of others—we recommend keeping the waveform of your narration relatively consistent throughout the piece.

Sound Studio allows you to create a new file and record all of your narration in consecutive segments. It lets you build your entire narration in one file, which can then be easily imported by iMovie. We recommend using Sound Studio for its ability to easily edit your audio narration, its waveform feature and its seamless integration with iMovie.

### Audacity

Audacity is another free, easy-to-use cross-platform sound editor that allows you to record, edit and export your voice-over narration. Although Audacity works with both Mac and PC, we especially recommend this software if you are creating your piece using Microsoft Movie Maker on a PC. Audacity can work with imported .wav and MP3 files, but it cannot work with .wma files, so plan your media accordingly. If you are working with Movie Maker, you may quickly realize the limitations of not having a dedicated audio track for the voiceover narration and a separate dedicated audio track for the sound track; use Audacity to mix these two separate tracks together into one file for use in Movie Maker.

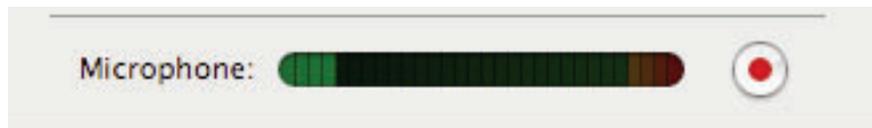


## iMovie

Yet another option for recording an audio narration when working on the Mac is to record directly into iMovie, which has a simple interface for this task.

Click the Media pane button to activate the **Audio/Photos** tab options. Click the **Audio** tab to activate the **Audio** pane. Notice the area at the bottom of the pane is labeled **Microphone**. Fortunately, most late-model Mac computers have a built-in microphone so you can speak directly into the computer to record. If you wish to use a different microphone, simply plug it into the standard microphone jack. If you're using an external USB microphone, plug it into a USB port.

Confirm that the microphone is working by speaking a few words and watching the green meter levels rise and fall with the sound of your voice. If you have chosen to use an external microphone device, you may need to select a different sound input source from the **System Preference>Sound>Input** options in order for the microphone to input the sound into the program.



To begin recording, press the red radio button on the right side of the Microphone levels bar. If desired, you can move an image or video clip into the Timeline to give you visual cues for your narration. (If you use a video clip, be sure to mute any audio on the track.) The audio recording will begin in the audio track where the Playhead is parked. To stop recording, press the red record button again. Notice that iMovie will drop the recorded track into available space on one of the two audio tracks. To hear the clip, move the Playhead at the beginning of the clip and press the Play button. To move the clip from one track to another, simply select and drag. If you are not happy with the narration you recorded, simply select it and delete the track from the Timeline.

Keep in mind you can record small sections of a narration at a time, then arrange them in the proper order in the Audio track of the Timeline. iMovie will number the audio clips in order as they are recorded; however, to keep your audio recordings organized, you may wish to double-click the recorded piece and rename the clip in the dialog box.



Although the ability to record narration in iMovie may be adequate for some purposes, it may not provide the control necessary for consistent recording results. iMovie allows you to view the audio waveform (a graphical representation of sound) by checking this option under the View pull-down menu. iMovie will not allow you to view both the waveform and the name/number of the clip at the same time, but hovering your cursor over the track without clicking will provide the identity of the clip. We stress the importance of having a consistent-looking waveform through the duration of the narration; for this reason, we recommend using one of the previously discussed audio editors (Sound Studio or Audacity) for finer control.

#### *Adding a (Non-iTunes) Sound Track to iMovie*

Earlier in this chapter we discussed how to add a music track to your movie using the Audio pane and selecting a track from your iTunes library. That is one way to add a music track, but what if you don't have an iTunes library? Like many applications, iMovie offers multiple ways to achieve the same result. In this case, we'll talk about how to add a music track to your story from a CD.

First insert the CD into the CD drive of the Mac. The CD appears on your desktop and iTunes launches automatically. If you don't know which track you want to select, use iTunes to listen to the tracks and make your decision. When you have determined which cut to use in your story, import it into iMovie.

To import a track into iMovie, first activate iMovie and choose **File>Import**. Navigate to the CD located on the desktop. Choose the desired track by double-clicking its name. iMovie will import the track. (Follow the progress by watching the progress bar.) By default, iMovie will place the beginning of the music track where the Playhead is positioned. Once the track has been imported, you can easily move it forward or backward to align with the beginning of your movie.

#### *Mixing and Adjusting Levels*

iMovie works with two audio tracks; however, iMovie is capable of layering up to 99 effects of music per track. The challenge is to adjust the volume levels of each effect, the music and the narration so that all of the elements can be heard in correct balance.

To adjust the volume levels, check the **Show Clip Volume Levels** option under the View pull-down menu. You will then see a purple rubber-band style volume control in each audio track that is present, including sound effects. Click any point of the purple control line to create an adjustment point. The point will turn yellow and permit you to raise it (increase volume) or lower it (lower volume) within the track, so just continue to raise and lower the point until you are satisfied with the volume settings.

On the right side of the Timeline are three **Audio shy-track** check boxes. When you check a box, the corresponding audio track is muted and you don't hear it. This feature can be very useful if you would like to work on the volume settings of the sound track and the sound effects without hearing the narration, and vice-versa.

Adjust the levels so that when all sound is played together, the volume is correctly balanced among the narration, sound track and sound effects. Voice narration should have priority; the sound track should be set lower, with sound effects balanced according to the time and duration of the intended impact.

Editing audio is really fun and you can spend a lot of time adjusting many nuances. Learn to hear what is playing and don't be afraid to experiment with different volume settings in order to detect the differences they can make in the way the story is heard.

#### THE DSI-RECOMMENDED WORKFLOW

1. Place voiceover narration in an audio track.
2. Begin ordering images into Timeline.
3. Create titles and place into correct position on Timeline.
4. Add Transitions between clips, titles and credits.
5. Add Ken Burns Effect on still photographs.
6. Add a sound track.
7. Add Video FX.
8. Add sound effects.
9. Adjust volume levels of narration, sound track and sound effects.

**Publishing the Work**

File Formats

Export the Finished Story for Other Uses

Using Digital Storytelling as  
a Resource for Change

## File Formats

If you have owned or used a computer during the past decade or so, chances are you have had occasion to view movies or video on it that was created by another computer. This may include a CD-ROM or DVD with built-in movies as part of the content, on the Internet, where video is frequently included as part of Websites, as video podcasts (vodcasts), and via e-mail.

Multimedia productions—video, animation and music created by a computer—must undergo a specific type of processing to be played back or viewed on a computer other than the one it was created on without the original software being present. Because file sizes of video pieces are very large, it is not practical to transfer and play them back at their original size on other computers. For this reason, movies must be compressed to a size capable of being moved easily from computer to computer. Once reduced in size (compressed), they can be copied and shared on a CD-ROM or DVD storage medium or via bandwidth on the Internet. Because the computer world is so complex and diverse, there are a number of **file formats** that video may be played back or viewed in. This section will briefly examine a few of the most commonly used digital video playback file formats.

### QUICKTIME (.MOV)

QuickTime is an architecture developed by Apple Computer. Multimedia processed using QuickTime add the extension **.mov** as an indicator that the file is a QuickTime file. QuickTime is the standard file format for Macintosh computers both for output (processing) and playback. To view QuickTime movies on a Windows machine, download the appropriate player from [Apple.com/quicktime](http://Apple.com/quicktime).

Because you have just created a digital story using iMovie, we will complete the production process using QuickTime so you and others may view your movie without iMovie software.

### REALPLAYER

Developed by Real Networks, RealPlayer is a software application or plug-in that provides playback for compressed multimedia productions. RealPlayer, compatible with both Windows and Macintosh platforms, will play media files located on your computer as well as on the Internet.

### WINDOWS MEDIA PLAYER

Windows Media Player is Microsoft's proprietary software for multimedia playback using PCs.



## PUBLISHING AND DISTRIBUTING YOUR STORY

iMovie's Share function provides very useful pre-set output choices for your digital story. Output specifications should be considered for whatever your intended distribution use or sharing purpose may be. There are many places to distribute your stories: YouTube, Facebook, and My Space to name a few. When you upload digital media to a server, you should try to keep the file size small for quick download.

Output specifications you should consider are:

### **Frame Rate**

Full-frame video runs at a rate of 30 frames per second. Anything less than this will have some visible "loss."

### **Screen Size**

Full-frame (full-size) digital video is sized at 720 pixels (horizontal) by 520 pixels (vertical). Half-size video is sized at 320 x 240 pixels, quarter size at 160 x 120 pixels.

### **Sound**

Sound can be in full two-channel stereo or mono.

### **File Size**

One of the most important considerations is file size. The file size correlates with the frame rate and screen size—the lower the frame rate and smaller the screen size, the smaller the file size will be. Moving large-size files across the Internet is only possible for people with very large and fast connections, so a smaller file is preferable for uses such as e-mail and Websites. Other storage media like CD-ROMs or DVDs can handle larger file sizes. CDs can hold approximately 700 MB of data and DVDs can hold approximately 4.3 GB of data.

### **iMovie offers pre-set compression settings for the following uses:**

#### **E-mail**

Use this option to process your movie small enough to e-mail to friends, family or business contacts. E-mailed movies are compressed at 10 frames per second, screen sized at 160 x 120 (pixels) and have mono sound.

**HomePage**

This option renders your movie for use on the Web. Your movie will be compressed to 12 frames per second, screen size of 240 x 180 (pixels) with mid-quality stereo sound. File size will be estimated.

**Videocamera**

This is a very useful and highly recommended option for archiving your story. We suggest archiving your completed movie to good-quality videotape. Be sure to label your tape and, following the transfer, flip the safety switch on the side of the tape to avoid recording anything else over your story.

**iDVD**

A discussion of iDVD requires an entire manual on its own, thus is beyond the scope of this workshop. Among other wondrous capabilities, iMovie integrates seamlessly with iDVD to add chapter markers within your movie.

**Quicktime**

QuickTime compresses video for various uses. We've already mentioned the settings for Email and HomePage. In addition, QT will process video for streaming Web (to play live from the Internet) at 12 frames per second, 240 x 180 pixels and mid-quality stereo sound. File size will be estimated.

QT compresses video for playback on CD-ROM at 15 frames per second, screen size of 320 x 240 pixels and full-quality stereo sound. Choosing to process your movie in Full Quality DV creates a single DV movie file with no loss of quality. Your movie will play full-size: 720 x 540 pixels, 30 frames per second with no loss of compression. These files will be larger in size than compressed files.

**iPod**

The iPod export setting formats your story for the iPod. It is sent directly to iTunes, placed in your iTunes library, and then you're able to copy it to your iPod.

**EXPERT SETTINGS**

Expert settings allow you to choose your own compression rates. The exported size will depend on which options you select. If you wish to experiment with Expert Settings, we recommend independently researching the various codec (compression/decompression) options available.

## ARCHIVING SUGGESTIONS

If you are not using your own computer to create your digital story, you probably would like to save all of your digital materials to work on again at another time, or even reuse some of the materials you created for this story in a different story.

We highly recommend archiving all your digital media, including working assets, iMovie project file and your completed movie. Because digital video uses tremendous amounts of hard-drive space (remember, five minutes of digital video takes up 1 GB of hard-drive space), all of your material combined is likely to take up a large amount of space. One suggestion for archiving your material is to invest in a FireWire hard drive. FireWire drives, for large amounts of storage space, are easy to connect to the computer and are becoming increasingly more affordable.

Another option is to archive your material to other forms of storage media, including DVD and CD-ROM. DVDs can hold approximately 4.3 GB of data and CDs hold approximately 700 MB of data. Try to assess the amount of material you will need to archive before deciding which storage device may work best for you.

### **We suggest archiving:**

#### **Digital Media Assets**

Original photograph and artwork scans, images that have been enhanced using Photoshop, voiceover narration files, iMovie project files and completed .mov files.

If you have original video footage recorded on a recent format of tape, you can save space on a hard drive or other storage device by not archiving video clips digitized for use in your project. Digitizing video is a very easy procedure using iMovie, and we suggest digitizing video on an as-needed basis. content—archive it to another format immediately.

## Using Digital Storytelling as a Resource for Change

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Sharing your digital story with friends and family is an essential part of the digital storytelling process. Digital stories can offer insight and knowledge that others may otherwise not know. Digital stories can preserve part of your essence so future generations may one day learn something about you—something you cared about and thought was important.

Communicating a message through story is a powerful resource; distributing stories to larger audiences can educate, encourage thought and initiate change. Digital stories offer people a chance to respond to world events or personal experiences, to process the event, interpret its significance to themselves and offer insight about how change is necessary.

Consider a cause you care about or a life-altering experience. Then realize how stories told about this subject may compel others to become involved, make a difference, effect a change.

Storytelling can be used as a resource for change, community and peace-building efforts, personal reflection and affirmation. Stories can be used as an archive or reference for historical events.

Integrate digital storytelling into your organizations' outreach efforts, self-publish and distribute stories via Websites or author your own CD or DVD. Submit your story to film and video festivals for exposure. Include your story in relevant presentations or speeches and screen it at meetings and gatherings. New media and independent publishing have enabled innovative and effective avenues through which to get your message heard!



**Storyboarding Template**

