



# Digital Primary Source Formats

# Workshop

## Prerequisite Tools and Skills

- Personal Computer (Windows or Macintosh) with Internet connectivity
- Familiarity with Internet browsing and searching using common web-browsers such as Microsoft Internet Explorer or Netscape Navigator
- Understanding of the Library of Congress web site, the American Memory project, and searching for primary sources
- Personal Computer (Windows or Macintosh) with Internet connectivity and at least: 256 MB of RAM, Pentium III 850 MHz (or higher), and either a CD-RW or DVD-RW optical drive.
- Web browser
- File Manager

# A4

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## Homework Activities

(Required for CEU credit)

- A completed Primary Source Asset List.

# Activities

## Resources

1. Annotated URLs used in this workshop.
2. One copy of the Primary Source Asset List.
3. List of topics/subjects you are interested in pursuing for classroom use.
4. Links to primary sources you have identified from.
5. The Library of Congress or other websites.  
Any primary sources you may already have.

# Resources

Class Preparation Checklist

**Workshop A4 – Digital Primary Source Formats**

***Required:***

- Personal Computer (Windows or Macintosh) with Internet connectivity and at least: 256 MB of RAM, Pentium III 850 MHz (or higher), and either a CD-RW or DVD- RW optical drive.
- Ability to utilize the Library of Congress website and search for primary sources.
- Ability to bookmark, link and save a Library of Congress URL (Uniform Resource Locator).
- Ability to download primary sources from the LOC web site. Recall Copyright and Fair Use guidelines.

***Optional:***

- List of topics/subjects you are interested in pursuing for classroom use.
- Links to primary resources you have identified from the Library of Congress or other websites.
- Any primary resources you may already have.
- Explore various Collections in the American Memory website and begin thinking about the types of activities you can create for your classroom.  
<http://memory.loc.gov/>

# Checklist

## Overview

### Digital Primary Source Formats

In this workshop, participants learn about the digital formats available for images, audio, and video. In addition, participants will be able to make an informed decision when selecting digital formats of primary sources for their lessons or other projects.

### Objectives

At the end of this workshop, participants will be able to –

- Determine which graphic primary sources to use for different purposes.
- Determine which audio primary sources to use for different purposes.
- Determine which video primary sources to use for different purposes.
- Utilize primary resources in a variety of formats.

# Overview

## Lesson 1 • Choose the Right Digital Format

NOTES:

Each primary resource type has been digitized into different formats. For example, there are three formats for audio files, three types of photography/graphic/map formats, and three types of video formats, each format having different qualities and methods for use. This lesson covers how to download any format or primary resource type to your computer.

### *Digital Audio Formats*

Sound recordings are offered in three different formats for listening:

- RealAudio (.rm).
- Mpeg 2, Layer 3(.mp3).
- WaveForm (.wav).

Each of these formats requires special players or plug-ins to listen. The RealAudio format can be played on a Mac or PC, but requires the Real One Player to listen. The Real One Player is available at <http://www.real.com>. Mp3 files provide great sound in a smaller file size and can be played on a Mac or PC. A computer's default player (QuickTime on a Mac or Windows Media Player on a PC) will play Mp3 files. Finally, WAV files are the highest quality and largest files available for download at the Library of Congress and take longer to download than the previous two file types. QuickTime and Windows Media Player will both playback WAV files.

### Activity 1-1: Choosing a Digital Audio Format

1. Open the Library of Congress Website:  
<http://www.loc.gov/>.
2. Click on the *American Memory* icon on the LOC home page: <http://memory.loc.gov/>.
3. Select the *Browse* button.

4. Choose *Sound Recordings* under *Browse Collections Containing*.
5. Click on *Hispanic Music, Rio Grande*.
6. Select the *Browse List of Titles* option.
7. Select the first category (From) *Adios, Maria (Goodbye, Mary) [Audio]*
8. Select *Adios, Maria* again.
9. Notice the first option offered is the Mp3 format. The other two formats, Real Audio and WAV, can be found and selected by clicking *Additional audio formats*.
  - a. Pros and cons to Mp3 file
    - i. Decent audio quality (especially music primary sources).
    - ii. Faster download/Smaller file size.
    - iii. Do not select Mp3 if you plan on using the audio in another digital presentation (PowerPoint or Video).
    - iv. Voice only files may sound “tinny.”
  - b. Pros and cons to Real Audio file
    - i. One time listen only.
    - ii. Does not download to a computer.
    - iii. Great for dial-up or low-bandwidth conditions.
    - iv. PC or Mac – Real Player required.
    - v. Do not select if you plan on using the file again.
  - c. Pros and cons to WAV file
    - i. Higher-quality format.
    - ii. Reuse in PowerPoint or Video presentations.
    - iii. Longer download time/Larger file size than Mp3.
    - iv. Windows compatible (will play in Mac OS 9 and above).

NOTES:

## Digital Video Formats

NOTES:

Video formats are offered through the Library of Congress in three versions for viewing: RealMedia (.rm), Motion Picture Experts Group (MPEG or .mpg) and QuickTime (.mov). As with the audio formats, each video format requires a specific player or plug-in to view. The RealMedia format can be played on a Mac or PC, but requires the Real One Player to view. Once again, the Real One Player is available at <http://www.real.com>.

The MPEG format is related to the Mp3 format in that it is Mp3's older visual sibling created by the same techie wizards at the Motion Picture Experts Group. MPEG is one of the oldest, but better quality formats available. To view MPEG files, a high-end, high-speed computer (such as a Pentium 90 or better with a PCI or AGP graphics card and Windows Media Player, or a PowerMac with QuickTime Player) is needed.

Finally, the QuickTime format is available for low-end playback on machines with less power and can be viewed best in the QuickTime Player. The image quality of the QuickTime movies is not as good as the MPEG format and not recommended for downloading.

In fact, the best option for downloading video is the MPEG format. This type of download will take longer, but the quality is much better in the long run. Use the following steps to download an MPEG video file.

### Activity 1-2: Choosing a Digital Video Format

1. Open the Library of Congress Website:  
<http://www.loc.gov/>.
2. Click on the *American Memory* icon on the LOC home page: <http://memory.loc.gov/>.
3. Click on the *Browse* button.
4. Choose *Motion Pictures* under Browse Collections Containing.
5. Select *Film, Animated ~ 1900-1921*.
6. Next to *Browse Index* select the *Alphabetical Title List* option.
7. Scroll down and select "*The Enchanted Drawing*."

8. Notice that there are three video options available and that each has an indication of the file size or purpose (the Real format is for dial-up modems or higher Internet connections).
  - a. Pros and cons of the Real Media format
    - i. One time viewing only.
    - ii. Does not download to a computer.
    - iii. Great for dial-up or low bandwidth conditions.
    - iv. PC or Mac – Real Player required.
    - v. Do not select if you plan on using the file again.
  - b. Pros and cons of the MPEG format
    - i. Highest Quality – Larger screen size.
    - ii. Reuse in PowerPoint, video or other applications.
    - iii. Longer download time.
    - iv. 1 minute of video = about 9 MB.
  - c. Pros and cons of the Quicktime format
    - i. Smaller, downloadable files.
    - ii. Not as clear as MPEG files.
    - iii. Do not use in other applications (PowerPoint).
    - iv. Requires QuickTime Player for either a Mac or PC.
    - v. 1 minute of video = about 6 MB.

NOTES:

## Digital Image Formats

NOTES:

Most images of maps, text/pages, photos, and other images are either GIF or JPEG formats. No special plug-ins or media players are necessary to view either of these formats. Occasionally, some images (such as maps) are also offered in a high-quality TIFF format that is more suitable for printing. TIFF files are much larger in size and require a special viewer or image software to view. Use the following steps to download an image file.

### Activity 1-3: Choosing a Digital Image File Format

1. Open the Library of Congress Website:  
<http://www.loc.gov/>.
2. Click on the *American Memory* icon on the LOC home page: <http://memory.loc.gov/>.
3. Click on the *Browse* button.
4. Choose *Photos and Prints* under Browse Collections Containing.
5. Click on *Environment, Natural ~ Photographs ~ 1891-1936*.
6. Next to “Browse by,” select the *Geographic Location* option.
7. Select *Colorado* on the map.
8. Click “*Marguerite Falls, Rocky Mountain National Park, Colorado*.”
9. Double-click the “thumbnail” image (a GIF file).
10. A full size JPEG of the image is presented.
  - a. Why use the small GIF file?
    - i. Thumbnail image in a document.
    - ii. Icon that hyperlinks to the bibliographic page at American Memory
  - b. Why use the full size JPEG?
    - i. Image size printing (not for enlargements)
    - ii. Import into PowerPoint slides

## Activity 1-4: Choosing a Digital Map Format

Maps and other large images in American Memory collections are presented as GIF, JPEG, or TIFF formats, as well as MrSID (.sid) format for the zooming feature over the internet. The MrSID format allows the viewer to select specific areas of a map and zoom in for greater detail. These detailed areas are then presented as GIF files and can be downloaded (although the quality may be not be good).

1. Open the Library of Congress Website:  
<http://www.loc.gov/>.
2. Click on the *American Memory* icon on the LOC home page: <http://memory.loc.gov/>.
3. Click on the *Browse* button.
4. Choose *Maps* under *Browse Collections Containing*.
5. Select *Panoramic Maps ~ 1847-1929*.
6. Next to *Browse by*, select the *Geographic Location* option.
7. Select *Colorado* on the map.
8. Click "*Bird's eye view of Aspen, Pitkin Co., Colo. 1893.*"
9. Double-click the "thumbnail" image (a GIF file).
10. A full size, zoomable image is presented.
  - a. Pros and cons of GIF files for maps
    - i. Use the small thumbnail image as a link to the American Memory page for the primary source.
    - ii. Some close-up images from the zoom feature can be used.
  - b. Pros and cons of MrSID files for maps
    - i. To use the zoom map feature offline and in the classroom. A special application (viewer) is needed and can be downloaded from the following site:  
[http://memory.loc.gov/ammem/help/download\\_sid.html](http://memory.loc.gov/ammem/help/download_sid.html).
  - c. Pros and cons of TIFF files for maps
    - i. TIFF files are best used for printing in a variety of sizes such as posters.
    - ii. Do not use TIFF files on Websites or large TIFF files in PowerPoint slides.