CLASS 4 LESSON PLAN

Structure and Deterioration of Multimedia Materials

Resources for the Teacher

Presentation of nonpaper media preservation is a challenge to the instructor because the various media differ in so many ways, and what is known about their composition, production, and longevity varies per medium type as well. Film photography technology is very well known and well supported by standards to ensure its longevity; but the same cannot be said for magnetic media or digitally captured media, for which there are fewer established standards to support their preservation and reformatting. Thus, it is essential for the instructor to check the literature in this area on a regular basis to stay current.

General


This essay provides a valuable introduction to the topic of moving image preservation. The author offers a general overview of both film and video formats, including brief descriptions of how these technologies emerged, and relates their development to the preservation problems inherent in commercially driven product development.


The challenge of moving image preservation for libraries, archives, and other cultural institutions is astutely presented by these authors and provides a context for the emergence of moving image preservation as a profession. Long-term and short-term preservation strategies are discussed as well the potential conflicts that arise when access to moving image materials is needed. The authors include both motion picture film and video in their discussion and provide a solid overview of the issues involved in their preservation.


A basic introduction to the preservation challenges posed by the wide range of newer media found in libraries and archives, and to the preservation issues resulting from the rapid move toward digitization in recent years. Environmental control, handling, use, copying, migration, refreshment, and management issues for media collections are discussed in general. Separate sections on still photographs, motion pictures, sound recordings, video recordings, computer data media, and
computer output media provide a brief description of formats and basic recommendations for storage, handling, use, and reformatting.

**Photographic Film—Still Images and Motion Picture Film**


This short but very valuable essay provides the reader with essential information for understanding storage choices for both photographic prints and negatives.


An illustrated guide for the identification of photographic processes used between 1840 and 1914 to produce still images. Treatment information is also included.


Aimed directly at an audience of cultural institutions, this guide offers thorough instructions for identifying motion picture film and film gauges and explains how they decay and how they should be handled, inspected, stored, cataloged, loaned, and distributed. There is also a section on copyright that includes information on donor agreements.


The author presents a very practical and thorough account of the individual steps involved in film preservation. Decision-making criteria are integrated within the preservation process to add context to the array of procedures from selection of films, at the beginning, to access, the final objective.


The author addresses the chemical and physical properties of black-and-white photographic materials and the causes of their deterioration. Basic information regarding the influences of environmental conditions, use and handling, storage, and disaster planning is provided.


This article traces the history of moving image preservation from 1967 through 1977 and places film preservation efforts in context. It is essential reading for anyone interested in the background and beginnings of film preservation.

This valuable contribution to motion picture film preservation follows a textbook approach to film preservation, but more from the motion picture film industry perspective than from a preservation perspective. That bias aside, the book contains a vast amount of technical information that is valuable for a deeper understanding of film restoration.


A detailed history of photographic processes used in still photography is described to familiarize readers with the characteristics of the many types of photographic prints and negatives likely to be found in cultural collections. Each type of photographic process is treated according to its placement in a timeline of photographic history, and their component materials and physical characteristics are described in detail. Other chapters address the stability of prints and negatives, their preservation needs, and collection management issues. An identification chart is included to aid readers in identifying specific photographic processes.


A hefty resource on color permanence, this text describes various color processes and the preservation problems commonly associated with them and much more. Wilhelm delves deeply into light fading and dark fading, the effects of adhesives and laminates, proper storage and environmental conditions, humidity-controlled cold storage, and freezing of color photographic materials. Students should be aware of this resource but do not necessarily need to read it from cover to cover.

**Sound Recordings**

http://www.clir.org/pubs/reports/pub106/sound.html

Brylawski discusses the path leading to digitization as the only logical reformatting choice for audio materials. This is an excellent primer on the issues surrounding digital conversion of audio materials and includes such topics as management of digital audio objects, copyright, metadata, standards, and distribution.


This well-written essay offers an accessible introduction to the topic for students. The author provides a complete and very thoughtful account of the importance of sound recordings to our cultural heritage and the unique vulnerabilities they suffer owing to their material composition, physical format, and playback requirements. All types of sound recordings are covered, including magnetic audio tape, and there are appendixes in which the author has compiled valuable facts about these materials, such as “Weight and Space Requirements for Audio Materials.”

http://www.loc.gov/preserv/care/record.html
As indicated by the title, this Web site presents information related to the care and handling of sound recordings in a concise, easily accessible form.


This booklet provides basic information about the care and handling of sound recordings, similar to the Library of Congress Web site above, but in a hard-copy format.

**Audio and Video Magnetic Media**


The editors of this publication compiled 14 chapters written by experts in the field of television newsfilm and videotape for this manual. It is ideally suited for the curator, as well as the student of moving image preservation, as it provides both history and context for this unique genre of moving images. The traditional spectrum of collection management issues, such as appraisal, arrangement and description, cataloging, and preservation, is presented in practical terms and includes illustrations of equipment and supplies needed to view, handle, and store these materials.


This thorough analysis of audiovisual archiving includes a thoughtful introduction to the topic, followed by a section on definitions and terminology. The author addresses the archival principles involved in audiovisual preservation, access, cataloging, collection development, collection management, and ethics, all within the context of a wide range of cultural settings.


This site, hosted by Stanford University, was launched in 2007 with support from the National Center for Preservation Training and Technology and the Bay Area Video Coalition. It includes sections on techniques for preserving historic video, a video format identification guide (the Messier/Stauderman guide referenced elsewhere in this lesson), an online museum of historic video equipment, and a library of resources on video preservation.


A text version of a Web site of the same name that is not currently available.


Straightforward and concise, this guide contains basic information for the care of magnetic materials in a general context. The material is conveyed in nontechnical language easily understood in layperson’s terms.
Videotape Identification and Assessment Guide, provided by the Texas Commission on the Arts. 
http://www.arts.state.tx.us/video

This excellent Web site is a rich and thorough resource for information on videotape, its history, timeline, storage, handling, and condition assessment, and it provides helpful identification information.

**Optical Media**


Iraci describes the structure and stability of optical discs, includes illustrations, and reports the findings of his research study on the topic. The author describes various optical disc formats and how they are produced. Physical characteristics, causes of damage, and typical preservation problems are reported based on tests conducted by the author as part of a research study.

**Useful Web Sites**

Australia National Film and Sound Archive. *How to Care for Your Film.*


Little Film. See the description of film gauges, http://www.littlefilm.org/

Messier, Paul, and Timothy Vitale. “Video Preservation Website.”
http://videopreservation.stanford.edu/index.html

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Museum of the Moving Image. See the “Shutters, Sprockets, and Tubes” section.
http://www.movingimage.us/site/online/index.html

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