CLASS 3 LESSON PLAN
Structure and Deterioration of Paper-based Materials

Resources for the Teacher

General


This somewhat dense volume describes the principles of deterioration as they relate to collections materials.


A basic overview of the deterioration of materials found in archival collections. Covers the history of papermaking, acidic paper, types of paper, reprographic processes, inks and other media, animal skins, photographic materials, and adhesives. An excellent starting point for students.

Paper


This gives a good overview and comparison of various standards related to permanent and durable paper and describes some of the conflicts involved in specifying standards.


This is still considered one of the seminal works on papermaking. Those with a strong interest in the history of papermaking will want to read the entire book; for others, scanning the chronology of events in the back of the book will give a good overview.


Although this book is somewhat dense, it is well worth taking the time to read. One can read the verbal explanations and ignore the chemistry and equations. It gives a comprehensive overview of paper fabrication methods as well as deterioration processes. It is written for the papermaking industry, and reading it gives some idea of the significance of libraries and archives in terms of paper production worldwide.


A brief summary of the signs that indicate damage from photochemical deterioration, mold or insects, inappropriate environment, and poor storage.

**For Further Study**


**Inks and Colorants**


This is an enjoyable and highly informative text about the discovery and development of pigments. While the book focuses more on artist materials than on manuscript inks, many of the principles overlap, and it is entertaining enough to draw in a broad audience.


This short article describes the manufacture of copy pencils and the way they were used historically. It is particularly useful as an illustration that materials are not always what they first appear to be.


This Web site gives a comprehensive overview of the use of iron gall ink through time, and the resulting problems. It offers historic recipes and a detailed description of the damage that results from the interaction of iron gall ink and paper.

The “Paints” section of this Web site provides information on the history and characteristics of pigments.

For Further Study


Read the introduction and the chapter on pigments in any edition.


Skin Materials


A good overview of parchment manufacture and some of the conservation issues associated with skin materials. This is worth scanning quickly.


A good overview of leather manufacture. It is from the manufacturer’s perspective and thus does not go into detail about the problems with leather. This is worth scanning quickly.

For Further Study


Printing and Reprographic Processes


This reference book identifies various printing processes.
A summary of the production of architectural drawings and the photo-reproduction techniques used from the 1870s onward.

**For Further Study**


**Photographic Materials**


This recent, comprehensive guide to the care of photographic collections provides a thorough presentation of the preservation issues associated with photographic materials. Chapter 1 summarizes the types of deterioration associated with various photographic materials.


A classic resource to assist in identifying component materials and print processes, and in determining the stability of various types of photographic prints.


Addresses photographic collections from the archival perspective, including the history of photography, preservation issues and techniques, interpreting photographs, legal issues, digitizing, and using photographs in outreach and educational efforts.

**For Further Study**


Must be read in the original journal, since color is critical.

**Books/Bindings**


A very detailed overview of the historical development of bookbinding, as well as techniques used in hand bookbinding.


A basic introduction, with illustrations, to the structure of the book and the history of bookbinding.

**For Further Study**