

About Books



Books are at once basic, functional everyday items we are accustomed to using, and also complicated constructions made from many different materials. We collect a wide range of books, from Bibles, to favorite classics, to family journals.

The condition of a book can differ greatly from one book to the next: some books are heavily used, some are damaged through improper storage, and some remain in good condition despite their age. The following are some guidelines for storage practices, and tips to best preserve your books for the future.

Handling Books

Common handling errors and unnecessary wear account for many damages

that are easily avoidable.

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Flexing

While it is oftentimes easiest to lay a book open on a table, and even forcibly make it lay flat at a 180 degree angle, this action can place extreme stress on the binding, and is structurally damaging to the cover and spine. This is a damage commonly reported among university librarians. When possible, books should be hand-held; if a book is too heavy, it can be supported by placing a rolled towel below each cover to add support. This greatly re-

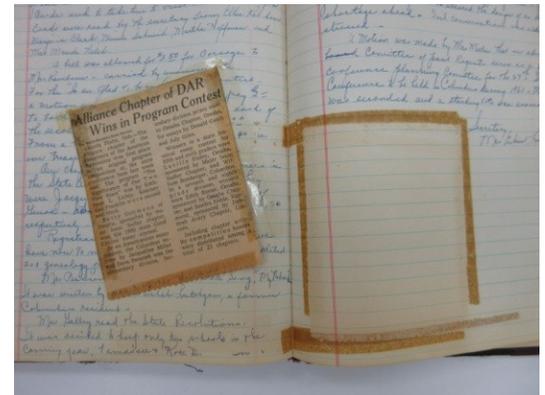
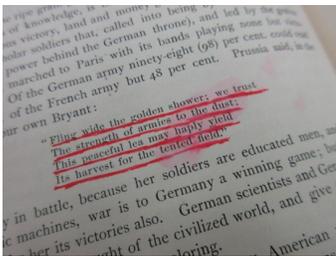


duces stress on the book, and ultimately extends its life.

Auxiliary Materials

Items like newspaper clippings, notes, and mementos are often found placed inside covers and between pages of books. Depending on bulk, this can cause the textblock to warp, and may result in discoloration, over time. Rubber bands used around the covers become sticky and leave lines of brown discoloration; sticky notes leave adhesive residue which discolors the paper; keepsakes like dried flowers cause staining to book pages. Do not attempt to repair the covers, spine, or pages of

a book with adhesives like Scotch® or masking tape. Quick fixes like this can lead to irreversible staining and exacerbate tears.



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Handwriting

Handwritten notes are common on inside covers, and annotations get scribbled in margins, especially with learning materials. Entire sections of Bibles are dedicated to family record keeping. If

you must write in a book, be sure to use a soft number two pencil. Ink pens and felt tip markers are irreversible; they can bleed, or transfer to other pages and are likely to run if the book becomes wet.

Cleaning Books

Simple cleaning procedures as a part of routine housekeeping can ensure that

books are well maintained.

Dusting

Dusting is an easy, preventive measure that helps to reduce dirt and particulate matter from bound collections. Book edges and covers can be cleaned using magnetic cloths, which help to pick up dirt and grime without the use of chemicals, due to their electrostatic surface

charge. These cloths should only be used on structurally sound books that do not have loose pieces, or flaking leather. If soiling appears heavy consult a conservator. Magnetic cloths can be purchased in the household cleaning section of most stores.

Procedure: To clean the top edge, hold the book closed, firmly in one hand; start at the spine and gently wipe the cloth in an outward motion, extending over the edge. Repeat this until dust and dirt is removed and repeat on the bottom and fore-edge.

Leather Dressing

It is not advised to oil or apply commercial leather dressings to leather-bound books. This is a cosmetic fix that is intended only to improve the appearance. Dressing and oils can cause staining and sometimes even

dry out the leather. Applications of dressings or oils can also result in a sticky surface, which can attract dust to the book. These measures will not help to preserve the book.



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Storing and Housing Books

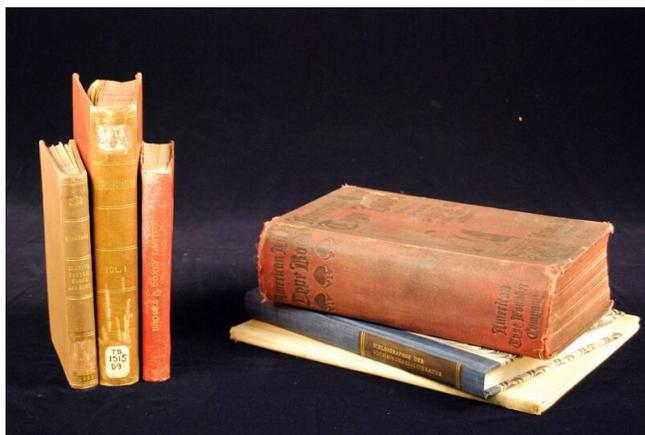
The long term preservation of books is dependent upon how they

are stored and the environmental conditions they are stored in.

Shelving

Books should be shelved vertically, next to other books of similar size. Do not lean books diagonally as this puts unnecessary stress on the

entire structure. Oversized books that do not fit easily in a bookcase can be stacked horizontally, with only a few books per stack.



Storage Boxes

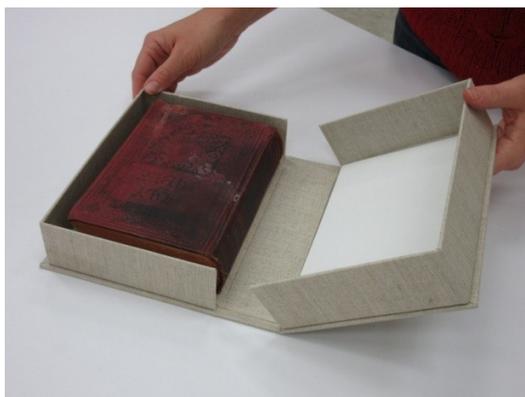
Boxes and special enclosures protect books from structural damages and can help buffer them from environmental fluctuations, like changes in humidity. Collections of newer and structurally sound books will not require enclosures in most cases, if they are properly shelved and regularly cleaned. However, books with damaged bindings or brittle paper that is discolored or torn, will benefit from being housed in a protective box.

There is a wide range of options for book storage, from four-flap enclosures to custom-made clamshell boxes; the appropriate material and level of protection is specific to each book. For instance, a thin, flimsy paperback book will benefit from a simple four-flap enclosure, while a heavy, decorative, leather-bound Bible should be housed



in a sturdier clamshell box. These book storage solutions can be purchased from conservation suppliers in a range of standard sizes, and some can be special ordered to fit the book. Be sure to look for terms like acid-free, lignin-free, and alphasag when choosing the proper enclosure. Lignin is an acidic component in cellulosic materials that deteriorates rapidly, and is capable of transferring acids to nearby materials. This is why it is important to always choose lignin-free storage materials.

Do not house a leather-bound book in an alkaline buffered box. The higher pH environment will cause deterioration to the leather. A good housing for a leather book is an acid-free, lignin free, unbuffered box, or a four-flap enclosure. Four-flap enclosures are simple to construct and can be made at home, using the proper materials (see *Making a Four-Flap Enclosure*).



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Environmental Conditions

There are a number of controllable environmental factors that cause the

majority of damage to books.

Humidity and Temperature

Relative humidity levels in the range of 30-50% are thought to be best for books. High humidity increases the risk of mold growth and warping, while humidity that is too low may result in embrittlement. Temperatures should be kept within a narrow range that is hospitable for habitation, not exceeding

72 degrees F. Wide fluctuations in RH and temperature have damaging effects on books so it is important to store them in a living part of the house. Avoid storing books in attics and basements where environmental fluctuations tend to be more drastic.

Light Exposure

It is also important to protect organic materials like books from overexposure to light, which exacerbates deterioration and causes discoloration. Ultraviolet light from the sun is extremely damaging to paper, but UV light is also emitted from indoor light sources, such as fluorescent bulbs. Exposure to books in your house can be

partially limited by using window shades and applying UV filtering films to windows, and sleeves to fluorescent lights. Remember: Light exposure is cumulative and the surest way to protect your books is to keep them out of direct light (both natural and artificial).

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Pests

Books are complex constructions made from materials including paper, paste, and cloth or leather. These are all materials that household pests, such as book lice and silverfish, like to eat. Pests can be monitored most successfully through simple observation. Regular housekeeping, like dusting and vacuuming, and routinely moving the

books will indicate if there is pest activity. A more preventive measure, which may be preferred for especially valued collections, is to place sticky traps on or near a shelf, which will indicate the types of insects present in the area (see *Integrated Pest Management*).



Water Damage

In the event of a leak or flood it is important to assess the damage to your books as soon as possible. The longer books are left damp or wet, the greater the chances are for mold

growth and extensive damages. If you find wet or damp books sort them into piles by degree of wetness: dripping wet, wet, and damp.



Materials Needed:

Oscillating fans

Newsprint (without printing)

Optional: dehumidifier, desiccants

Dripping Books

Dripping wet books are the most difficult to salvage. These can be placed individually in polyester, polyethylene, or polypropylene bags and placed in a cold freezer. If bags are not available, make sure the books are not touching one another; inter-

leave them with plain newsprint or plain white paper towels. The freezer method prohibits most mold growth and allows for other books to be addressed first. When dealing with books this wet, consult a conservator should be consulted for advice.

Wet Books

Wet books should be interleaved with clean, plain newsprint, which helps to absorb moisture by wicking it out of the paper. For thick or tightly-bound books, place a piece of newsprint every five to ten pages. Check on the books regularly, per-

haps every thirty to sixty minutes. If the newsprint appears cockled or feels damp, replace and discard the used pieces. Continue this procedure until books are dry or damp. Newsprint can be purchased at office supply stores.

Damp Books

Damp books should be placed upright on a table or flat surface and opened to about a 60 degree angle, or as far as the book allows. A standard oscillating fan should be placed in front of the books and set to the

highest setting. This helps to reduce moisture by 'drying' the books while also keeping the air circulating so mold spores cannot grow. Flipping the books upside down periodically will help to ensure even drying. Fans should be set

throughout the room to keep a constant airflow. If possible, a dehumidifier should be placed in the area to lower the relative humidity of the space. Desiccants can be used in addition to or in place of a dehumidifier to

help buffer moisture in the air. These are available at hardware stores. Be sure to follow the manufacturer's guidelines for use.

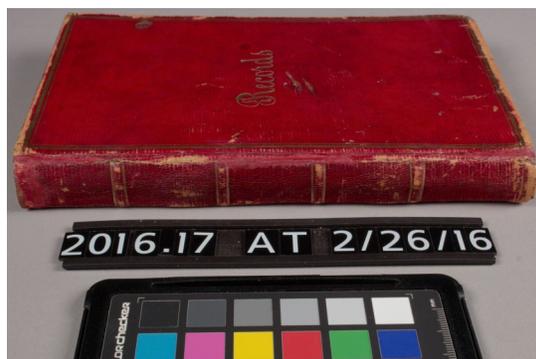
Contact a conservator immediately for specific concerns with wet books.

Consulting a Conservator

If your book has loose pages, the spine is missing, or it is simply falling apart, a conservator can help. Conservation professionals can make sympathetic structural repairs that will help to best preserve the book, and in many instances make it more functional. Professionals charge either by the hour or by the project so it is

important to consider both the significance of the book and the treatment costs. Some issues like mold, severe structural damage, or water damage may warrant conservation, while other books may be best preserved by simply purchasing an appropriate storage box. Consult a conservator for further information.

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Consulting a Book Appraiser

The majority of books have much greater intrinsic than monetary value, as family heirlooms and keepsakes. Factors like rarity, condition, and the collectors' market all must be taken into account. Book appraisers can provide basic information for rare or special books and usually provide an esti-

mate for the monetary value of a book. Accredited members of the Appraisers Association of America can be found in the resources section of this document. Conservators, librarians, and archivists should not be consulted for appraisals; these professionals are not trained to assess value.

Additional Resources

Cleaning Books

The British Library. *Cleaning Books and Documents*. Retrieved from http://www.bl.uk/aboutus/stratpolprog/collectioncare/publications/booklets/cleaning_books_and_documents.pdf

Northeast Document Conservation Center. *Cleaning Books and Shelves*. Retrieved from <https://www.nedcc.org/free-resources/preservation-leaflets/4.-storage-and-handling/4.3-cleaning-books-and-shelves>

Caring for Books

American Institute for Conservation. *Caring For Your Treasures*. Retrieved from <http://www.conservation-us.org/docs/default-source/public-relations/books.pdf?sfvrsn=0>

Library of Congress. *Care, Handling, and Storage of Books*. Retrieved from <http://www.loc.gov/preservation/care/books.html>

Appraisers

Appraisers Association of America. Retrieved from <https://www.appraisersassociation.org/index.cfm?fuseaction=page.viewpage&pageid=749>

Conservation Suppliers

Conservation Resources International

5532 Port Royal Road
Springfield, VA 22151
Toll free: (800) 634-6932
www.conservationresources.com
Archival housing/storage supplies, photographic supplies, general

Gaylord Archival

P. O. Box 4901
Syracuse, NY 13221-4901
Toll Free: (800) 448-6160
www.gaylord.com
General conservation supplies, housing supplies

Hollinger Metal Edge, Inc.

6340 Bandini Blvd
Commerce, CA 90040
Toll Free: (800)-862-2228
www.hollingermetaledge.com
Archival housing/storage supplies

Light Impressions

100 Carlson Road
Rochester, NY 14610
Toll Free: (800) 975-6429
www.lightimpressionsdirect.com
Photographic supplies, housing, matting and framing supplies

University Products

517 Main Street
P. O. Box 101
Holyoke, MA 01041
Toll Free: (800) 628-1912
www.universityproducts.com
General conservation supplies, housing and matting supplies

Talas

330 Morgan Ave
Brooklyn, NY 11211
Telephone: (212) 219-0770
www.talasonline.com
Conservation supplies, photographic supplies, general

Gerald R. Ford Conservation Center

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Nebraska since 1878.