

## PRESERVATION OF ARTIFACTS:

Use the following guidelines to keep your historic memorabilia in the best shape possible. Here we cover general hazards to artifacts and specific techniques for preserving textiles, paper, photographs, metal, leather and wood.

Looking for a conservator? Check out our list of conservation resources below.

### SEVEN HAZARDS TO HISTORIC ARTIFACTS

The basic principle of preservation of historic memorabilia is DO NO HARM. The following hazards are recognized as some of the most dangerous to historic memorabilia.

- 1. LIGHT**  
Too much light speeds deterioration of photographs, textiles and printed or handwritten paper, furniture, etc. Historic objects should be protected from excessive light levels, and especially from sunlight and florescent light, which contain high amounts of ultraviolet radiation--which is the most harmful form of light. Place furniture, antique quilts and other memorabilia out of direct sunlight and/or florescent light.
- 2. TEMPERATURE**  
Too high or too low a temperature (or rapid temperature swings) can damage rubber, wood, metal, etc. Store or display historic memorabilia in spaces that have climate-control systems (heating and air conditioning). Do not store in sheds, attics and basements.
- 3. HUMIDITY**  
Humidity that is too high encourages pests and mold growth on paper, textiles and parchment, and promotes rust on metal. Humidity that is too low can cause objects to become brittle. Organic objects in particular absorb and release moisture depending on the relative humidity of their environment and need a stable humidity. Store historic memorabilia in an area that has a steady, constant humidity (45%–55%), and store or display historic materials away from heating and air conditioning vents.
- 4. PESTS**  
Different types of historic materials attract different types of pests. Roaches and silverfish are attracted to paper and books. Moths are attracted to protein fibers such as silk and wool. Termites are attracted to wood. Conduct regular inspections of historic objects that attract pests.
- 5. HUMAN BEINGS**  
Human beings are one of the greatest threats to historic objects, not only due to surface compounds, such as oil, sweat and make-up that they carry on their skin, but also because we continue to use historic objects. These oils and other surface substances are transferred to the object during handling. Wear cotton or nylon gloves when handling historic paper, textiles, photographs, and wooden and metal objects. Many objects are damaged because people handle them in inappropriate ways, such as trying on clothing, taking items to show-and-tell at school or even using them for their original purposes. All of these uses put undue strain on the objects and put them at risk for loss or damage.
- 6. CHEMICAL REACTION & AIR POLLUTANTS**  
Certain types of materials, such as metal and marble, react to chemicals present in the air. This is a particular concern for outdoor objects such as marble statuary, iron architectural elements, etc. Chemicals such as formaldehyde and acidic gases from wooden compounds can also harm historic objects.
- 7. INHERENT VICE**  
Some objects that are composed of incompatible materials, such as wood and leather or wood and paint, have built-in deterioration risks. Conduct regular inspections of these objects for any changes in condition.

## Basic Preservation Techniques for Textiles

Textiles--or objects made from woven fibers — are among the most common types of artifacts found in museums or within a family. Most families have a treasured textile such as a quilt, wedding dress or tablecloth that has been handed down through the generations. Until the 20th century, textiles were made from natural sources, such as cotton or linen plants or sheep or silkworms. In the 20th century, synthetic or laboratory textiles have been developed such as rayon, nylon and acetate. Textiles (and the dyes used to color them) are very susceptible to damage from light, acids and pests.

- Store textiles in climate-controlled spaces, not in attics or basements.
- Store or display textiles away from bright light, especially sunlight and florescent light that contains high amounts of UV radiation.
- Store textiles in acid-free boxes designed for this purpose. Do not store heirloom textiles in a wooden dresser drawer or an ordinary cardboard box.
- If possible, store textiles in a flat position, without folds. Gravity acts with the weight of the textile to alter the original shape and condition of the piece.
- If displaying a quilt, tapestry, flag or other hanging textile, make certain the textile is supported by a piece of backing fabric. Do not let the textile hang by its own weight for an extended period of time.
- Remove staples or pins from textiles as they may rust and stain the textile.
- If storing a garment or flat textile in a box, make certain that there are no hard creases or folds. Pad any folds or creases with acid free paper. Stuff arms of jackets and the body of jackets or bodices so the fibers are supported.
- Wear clean cotton or nylon gloves when handling heirloom textiles.
- If moving an heirloom textile or garment from one location to another, support the textile by having a stiff support under it or by having it housed in an acid-free box. Do not let the textile bear its own weight while being transported.
- If you must store a garment on a hanger, pad the hanger so that there is a natural shoulder shape across the top of the upper garment and if storing trousers, pad the trouser bar.
- Large, flat textiles, such as quilts or rugs, may be rolled around an acid free cardboard tube for storage. Store rolled textiles horizontally and off of the floor.
- Do not store heirloom textiles in sealed plastic bags.
- Protect textiles from dust with unbleached muslin bags or muslin fabric dust covers or by storing in an acid-free box with a lid.
- Do not wash heirloom textiles in the washing machine or give them to a commercial dry cleaner to clean by tumbling.

## Basic Preservation Techniques for Paper

Most paper in the last 300 years has been made from either linen or cotton rags or wood pulp. Rag paper has a low acid content and is much more stable than pulp paper. Wood-pulp paper, the kind used for newspapers, is usually very high in acid and deteriorates rapidly.

- Store documents in a climate-controlled environment, not in attics or basements. Paper is subject to mold growth. Store or display below 72 degrees F and 50% to 55% humidity.
- Store documents flat without folds or creases. Folded paper fibers are weakened at the point of the fold and will deteriorate more quickly at that part of the page.

- Paper is sensitive to attack by pests such as silverfish and roaches. Inspect old documents regularly to check for insect infestation.
- Store rag paper and pulp paper separately — acid migrates from the more acidic surface to the less acidic surface (for example, separate the newspaper clipping about your wedding from the wedding invitations).
- Display paper away from sunlight or florescent light. Light will cause the surface coatings, such as ink, to fade and (if the paper has a high acid content) will hasten the deterioration of the paper.
- Display documents, postcards and currency using only archival quality mats, backing boards, etc. Specify to the frame shop that the materials are to be archival quality and acid free.
- If possible, do not display paper against the outside wall of a building. Exterior walls experience more fluctuations in temperature and humidity than interior walls do.
- If storing documents, store them in acid-free folders, boxes or chemically inert plastic sleeves.
- If there is no alternative to using a wooden bookcase for storing paper or books, place the paper or books in acid-free boxes or folders and/or place an acid-free paper barrier between the books and wooden shelf.
- Consult a conservator if you need to de-acidify documents.
- Do not use rubber bands, staples, straight pins or paper clips when storing heirloom documents.
- To minimize the risk of water damage, do not store boxes of documents or framed paper items on the floor.

## Basic Preservation of Photographs

Photographs provide us with a special form of historical documentation. They provide a graphic representation of the past not found in other media. Photographs are physically and chemically complex and require special care to preserve. Photos are especially susceptible to deterioration from chemicals left over from processing, careless handling and fading from light, especially sunlight and florescent light. Take time now to preserve your images for future generations. Each photograph is a unique window into the past that cannot be replaced.

- Photographs should be stored in a cool, dry location. High temperatures and humidity are damaging to photos.
- Avoid displaying photographs in bright light or direct sunlight.
- Store and frame photographs in acid-free inert materials.
- Never touch the surface of a photograph; hold them by the edges or use clean cotton gloves.
- Do not use tape, paper clips, rubber bands or Post-it notes on your photographs; they can all cause damage.
- Do not use ball-point pen or felt-tip markers to write on photos. Label them on the back with a soft pencil. You may wish to number them and write out longer descriptions separately. Another alternative is to photocopy the photograph and write your information on the photocopy. Never write on the front of a photograph.
- Do not store your photos in self-adhesive albums. Use acid-free storage material or inert plastic sheets. Take care to preserve your negatives also. Use acid-free or inert plastic sleeves to store them.
- Color photographs are not as stable as black and white. Consider having your color images professionally copied in black and white; you may lose the color, but you'll preserve the image.
- If you wish to display your photographs, you may want to consider having them copied and displaying the copies. That way your originals will be protected from fading or other possible damage.
- When mounting photographs, be sure to use acid-free materials. Photographs should be attached to the backing board with Mylar corners rather than being glued or taped down. An acid-free mat should be used to keep the glass from touching the photograph.

- If you are displaying original prints, consider rotating one photograph with another to limit the amount of fading.

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## Basic Preservation of Metal Artifacts

All metal except gold is susceptible to oxidation or corrosion. Prevention of corrosion or oxidation is the primary goal in caring for metal artifacts. Most corrosion is caused by moisture, although certain chemicals can also play a role. The oils and acids that occur naturally on skin can be very damaging to metal artifacts. One of the simplest ways to help preserve your artifacts is to store them in a relatively dry environment. Typically, metal artifacts should be stored in living areas, which are much dryer than sheds, garages or basements. Attics are generally too hot for most artifacts.

### General Rules

- If you are unsure what to do, seek professional guidance.
- Do not attempt to clean or polish metal artifacts without seeking professional advice.
- Do not handle metal artifacts with bare hands; gloves should be used.
- Generally speaking, commercially available dip-type tarnish removers should be avoided.
- The use of spray-on lacquer or similar coatings is seldom advisable.
- Although some oxidation or corrosion may be damaging to an artifact, they may also add to the value. Restoring an artifact to its original condition is not always the prudent course of action.

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## Iron and Steel

This is one of the most common metals and is commonly found in firearms, bayonets and swords. Steel and iron, especially those having a bright polish, are very susceptible to rust. The fine polish of a sword blade can easily be permanently marred by touching the blade with bare hands. Always handle metal artifacts with clean cotton gloves. Steel artifacts may be preserved by keeping them oiled with light oil, such as 3-in-One. Additionally, the metal parts may be protected with a coating of wax, such as SC Johnson Paste Wax. Care should be taken to coat all areas; you may wish to consult a gunsmith to help with disassembly of weapons.

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## Painted Metal Artifacts

Painted metal artifacts require limited special precautions. Generally the paint will protect the artifact. The painted surface should be protected from being scratched. Care should be taken during storage or display to protect these items from being scratched or chipped.

## Copper, Brass, Silver

These metals are relatively stable. Their oxidation provides a stable coating that protects the metal. These metals generally should not be cleaned or polished without consulting a professional. Silver items that have been polished can be stored in Pacific Silver Cloth to reduce tarnishing.

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## Basic Preservation of Leather Artifacts

Leather is a difficult item to preserve; care should be taken to store in medium humidity and moderate temperature. Generally speaking, storing it inside your home is suitable.

- Avoid displaying leather items in direct sunlight or bright light. If the leather is dirty or moldy, clean it with damp cotton cloths.
- Do not use saddle soap or leather conditioners.

- If the item feels overly dry or stiff do not use petroleum products (or anything that does not list its ingredients) on your leather. Anything that is put on leather is there to stay—beware of creating problems.
- Most leather will stiffen over time; this is generally not a problem, as historic items should not be used. Take time now, while the leather is pliable, to support the item in a displayable manner. For example, lightly stuff the toes of shoes or boots to help them maintain their shape, use acid-free tissue; boot tops can be supported with acid-free tubes made from file folders. Do up all the laces and buckles.
- Likewise, leather cases should be stuffed to hold their shape. If you are opening and closing a case, do not continue to fasten buckles every time; this will certainly lead to breakage.
- The above information does not apply to suede or kid leather; consult a professional for preservation of items made from these types of leather.

## Basic Preservation of Wood Artifacts

Wood is a relatively stable material to preserve. Wooden artifacts can be maintained for years, provided that some basic care and attention is given to their preservation.

- Store wooden items in your home where they are protected from extremes of temperature and humidity.
- Avoid direct sunlight or bright light, which will fade finishes.
- Avoid all temptations to over-clean or refinish wood items.
- The use of linseed oil or other oil-based products on wood items is not required or recommended.
- If wood items are handled, a protective coating of wax, such as SC Johnson Paste Wax may be applied.
- When oiling firearms, take care not to get oil on the grips or stock.

To obtain a list of conservators or a pamphlet on selecting a conservator, contact:

### **The American Institute for Conservation**

1717 K St. NW  
Suite 200  
Washington, DC 20006  
202-452-9545

### **ONLINE CONSERVATION RESOURCES**

Conservation and preservation information for the general public

<http://palimpsest.stanford.edu/bytopic/genpub/>

American Institute for Conservation of Historic & Artistic Works

Find a nationally recognized conservator for your objects

<http://aic.stanford.edu>

The Library of Congress Information on the preservation of paper materials and photographs

<http://lcweb.loc.gov/preserv/preserve.html>

Northeast Document Conservation Center

Paper and photo conservation information

[www.nedcc.org](http://www.nedcc.org)

### **CONSERVATION MATERIAL SOURCES**

Gaylord Brothers

P.O. Box 4901

Syracuse, NY 13221-4901

800-448-6160

<http://www.Gaylord.com>

University Products  
517 Main Street  
P.O. Box 101  
Holyoke, MA 01041-0101  
800-628-1912

<http://www.universityproducts.com>

Talas  
330 Morgan Ave.  
Brooklyn, NY 11211  
212-219-0770

<http://www.talasonline.com/>

### **APPRAISALS**

The National WWII Museum cannot appraise your artifacts. The Internal Revenue Service considers such activity by a 501c(3) a conflict of interest. The following agency is available to assist donors with appraisals.

Appraisers Association of America, Inc.  
386 Park Avenue South, Suite 2000, New York, NY 10016  
212-889-5404 x 10  
aaa@appraisersassoc.org

<http://www.appraisersassoc.org>

Or contact the following organization for a list of professional appraisers.

American Society of Appraisers  
PO Box 17265  
Washington, DC 20041  
703-478-2228

If you plan to get an appraisal for artifacts, please get them photographed, photocopied and/or appraised before sending them. The National WWII Museum does not offer these services.