

About Photographs



Photographs are among the most valued personal objects because they tell stories that chronicle people's lives. Preserving these items is important for anyone who wants to pass down the visual record of their family history. However, even the most well-intentioned care can cause damage to photographs; handling and properly storing photographs is key to ensuring their longevity. The following are some guidelines for handling and storage practices to help best preserve these items for the future.

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Knowing the basic structure of a photograph helps to better understand why they are such delicate artifacts. The composition of photographs can be divided into three different parts, or materials: a support base, an emulsion, and the image material. The support is commonly paper but may also be glass, plastic film, metal, or resin-coated paper. The emulsion, or binder layer, holds the final image material to the support; it is most commonly gelatin but may also be albumen or colloid. The image material can be made of silver, color dyes, or pigment particles suspended in the emulsion layer. Each of these layers can react differently to environmental fluctuations and structural damages, which make photographs very complex paper-based items.



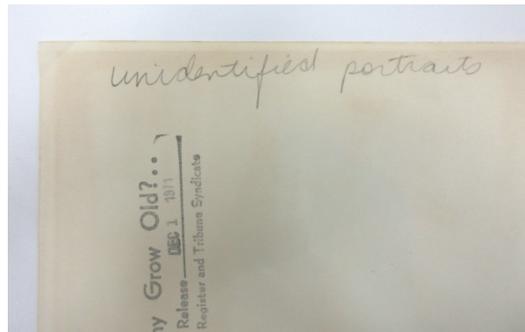
A common example that most people have in their family collections, is a silver-gelatin print on paper.

Handling

“Avoid using ink pens, stamps, markers, or self-adhesive labels.”

A major source of damage to photographic materials is improper handling. When handling photographs and negatives, be sure to use clean hands; wearing clean, lint-free cotton gloves will help prevent fingerprints and scratches to the surface or emulsion. Do not force curled photographs, such as panoramics, to flatten by prying them open. This can cause cracks and tears in the emulsion that can affect the entire structure.

It is not advised to write directly on photographs to label them. Labeling the folder or sleeve they are stored in is preferable in every instance. However, if you must label items directly, use a soft number two pencil, lightly



on the back of the photograph in a margin or corner. Avoid using ink pens, stamps, markers, or self-adhesive labels. Ink pens and felt tip markers are irreversible; they can bleed, or transfer to other photographs and are likely to run if the item becomes wet. If you cannot label directly on an item, such as a tintype, label the folder or sleeve using a Pigma® Pen. Do not use these pens directly on your item.

Storing

The best way to protect photographs is through proper storage. The following are some recommendations for storage as well as examples of common storage solutions that should be avoided.

Like paper documents, three layers of

protection is ideal for photographs: The first layer is an inert plastic sleeve to provide protection. These sleeves should be polyester, polyethylene, or polypropylene. The second layer is an acid-free, lignin-free folder made of alpha cellulose or rag paper to provide

support. Folders can be used to organize several photographs of a similar size and afford more protection than a plastic sleeve alone. Be sure not to overstuff folders and be certain that the folder or sleeve completely covers the photograph; do not allow the item to stick out on the top or sides of the folder or sleeve. The third layer is an acid-free, lignin-free, alpha cellulose or rag board box for safe storage and easy removal of photographs. Some conservation suppliers even sell these materials in premade storage kits, which are ideal for housing smaller photographic collections. Inert plastic sleeves and custom storage boxes are available for negative storage and are available through conservation suppliers.

When packed properly using three layers of protection, a range of different sized photographs can be housed together in the same storage box. Be sure to stack items horizontally from largest

to smallest and do not overstuff boxes. Photographs can also be stored vertically in boxes, in individual, inert plastic sleeves, if they are the same size.

If three layers are not possible, protect your paper-based documents with two layers, either in a folder *or* a plastic sleeve *and* place them in a storage box.

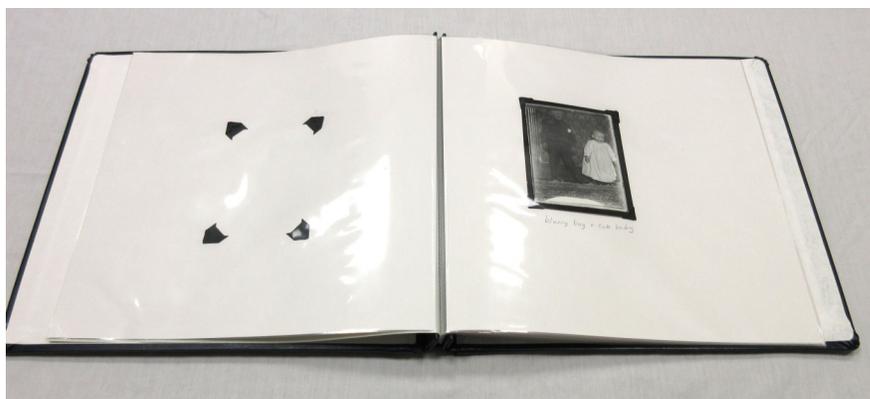
For information pertaining to oversized photographs, or special format materials, such as tintypes or glass plate negatives, see the National Park Service link in the Additional Resources section of this document.



Photo Albums

One storage solution that is unique to photographs is the photo album, which allows for convenient storage and display. However, many photo albums contain poor-quality materials that can cause discoloration, embrittlement, and staining to photographs. If a photo album is preferred for photograph storage, there are a few basic guidelines to follow.

It is important to choose albums that



have acid-free, lignin-free paper backing pages. Lignin is an acidic component in cellulosic materials that deteriorates

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rapidly, and is capable of transferring acids to nearby materials. This is why it is important to always choose lignin-free storage materials. Use photographic corners with adhesive backing to hold photographs in the album. These corners can be purchased from conservation suppliers and craft stores; look for terms like acid-free and lignin-free when choosing the appropriate photo corners. Do not use adhesives, or common pressure-sensitive tapes such as Scotch® or double-sided tapes. These adhesives can stain and discolor photographs over time.

If the album does not have plastic sheet protectors to cover the photographs, choose an album with interleaving tissue or paper between each page. This reduces the risk of scratches to the emulsion or more serious damages should the photographs become wet.

Many albums have pre-cut plastic slots that hold common sizes, such as 4 x 6” prints. This is a preferable option because it does not require adhesive. The plastic sleeves should be made from

polyethylene, polyester, or polypropylene. To ensure the album meets all of these criteria, it is safest to purchase from a conservation supplier.

It is best to avoid using photo albums composed of unknown materials. Magnetic photo albums are one example. These albums typically have thick, paper-based backing pages with an adhesive layer, and clear plastic film intended to protect photographs. Albums like this were commonly manufactured from the 1960s-1990s. Over time, the adhesive used on the pages breaks down, becoming semi-permanent and rigid. This makes it difficult, if not impossible, to remove photographs. This adhesive is prone to discoloration, which can migrate into photographs and alter their appearance. Photographs in these albums should be removed, if possible. It may be necessary to consult a conservator for removal advice.

Older and inexpensive photo albums often contain low-quality paper that can become highly acidic over time. One common example of this kind of



album has backing pages that are dyed black or grey; while they may look attractive, they are also acidic and can be harmful to photographs. The best rule of thumb for purchasing quality photo albums is to ensure the materials are stable. Paper components should be described as being acid-free and lignin-free, and have alpha cellulose or rag backing pages. Plastic components should be composed of inert plastics such as polyester, polyethylene, or

polypropylene to ensure the longevity of photographs.



Display

In many cases, the best solution for displaying a photograph is to use a copy of the original. When framed, a color facsimile will look like the original. Displaying a copy saves the original photograph from cumulative light exposure, which causes irreversible fading. This is also a safe way to share original and unique images with family members. Photographs can be duplicated by a number of processes including photocopying, digital imaging, and high-resolution scanning.

When duplicating original materials it is important to remember that photographers or processing technicians can damage items, as they are not always trained in specialized handling. Tightly curled photographs can be broken easily. Fragile items should be taken to a professional that you trust. A good commercial photographer can digitize photographic collections and make 'touch ups' on digital images. Consult a conservator to discuss local options for digital imaging.

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Environmental Conditions

There are a number of controllable environmental factors that directly affect the preservation of paper-based items. The most important aspect of storage for photographs is to provide a stable environment without major fluctuations in temperature and relative humidity. Relative humidity levels in the

range of 30-40% are thought to be best for photographic materials. High humidity increases the risk of mold growth, while humidity that is too low may result in the embrittlement of organic materials. Temperatures should be kept within a narrow range below or just at room temperature, not ex-

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ceeding 72 degrees F. It is important to store photographic materials in a cool and dark space, such as a closet or desk in a living part of the house. Avoid storing photographs in attics and basements where environmental fluctuations tend to be more drastic.

It is also very important to protect photographs from overexposure to light, which exacerbates deterioration and causes discoloration. Ultraviolet light from the sun is extremely damaging to

the emulsion, but UV light is also emitted from indoor light sources, such as fluorescent bulbs. Photographs should not be subjected to constant light exposure, and are best housed in a photo album or storage box. Light exposure is cumulative and the surest way to protect your object is to keep it out of direct light (both natural and artificial) and limit the amount of time your photographs are on display. Once the image fades, it cannot be restored.



Consulting a Conservator

Photograph conservation is a specialized field that deals with treating the complicated layer structure of these items. Paper conservators can provide storage advice and often basic treatment such as tear repairs, flattening, and cleaning. Tightly rolled photographs and those that need to be removed from photo albums should be assessed by a conservator. For photographs with complex damages, like staining and mold, and for photographs with non-paper supports, such as tintypes or daguerreotypes, a conservator of photographic materials should be consulted.

Additional Resources

Identifying Photographic Processes. <http://www.graphicsatlas.org/>

Northeast Document Conservation Center. *Care of Photographs*. Retrieved from <https://www.nedcc.org/free-resources/preservation-leaflets/5.-photographs/5.3-care-of-photographs>

National Park Service. *Caring for Photographs: Special Formats*. Retrieved from <https://www.nps.gov/museum/publications/conservation/14-05.pdf>

Hollinger Photograph Storage Kits <http://www.hollingermetaledge.com/modules/store/index.html?dept=21&cat=1326&cart=146246546942690825>

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.