

CARING FOR YOUR TREASURES



HOW TO PROTECT YOUR BOOKS

The book is an ingenious invention. Compact and portable, it has been the primary means of transmitting and preserving mankind's accumulated knowledge for hundreds of years. Throughout that time, printers and bookbinders have used a wide variety of materials and structures. Some have proven to be remarkably durable; others have been vulnerable to chemical deterioration and mechanical stress. While these problems can be quite complex, a few simple preventive measures can greatly extend the life of a book.

ENVIRONMENTAL CONDITIONS

Books are composed of a variety of materials: paper, cloth, leather, paste, and glue. These, like all organic materials, are vulnerable to conditions and changes in the environment in which they are kept. Key factors are light, temperature, and humidity.

Books should not be exposed to excessive amounts of light. Daylight and fluorescent light, which have high levels of ultraviolet radiation, cause the most rapid deterioration and fading. Normal incandescent house lights are less harmful, although all light causes some damage. Keep lights turned off in rooms that are not in use. Block daylight by using curtains, shades, or plastic filtering films.

Similarly, books should not be exposed to rapid changes or extremes in temperature and humidity. Hot and dry conditions will desiccate and embrittle leather and paper; damp conditions will encourage mold growth. Therefore books should not be kept near sources of heat, such as radiators or fireplaces. Bookshelves should not be placed against outside walls, where pockets of cool damp air can develop. Air conditioners, dehumidifiers, and humidifiers can be used to remove or add moisture or heat. A cool, dry, and stable environment is ideal. Where the book rooms are in regular use, around 70 degrees Fahrenheit and 50 percent relative humidity is recommended.

SHELVING

It is extremely important that books stood vertically on shelves are squarely upright and firmly supported by neighboring books or by bookends. Leaning at an angle puts stress on the entire book structure, deforming the spine and the joints where the covers are attached. Bookends must be stable and smooth so as not to damage the covers. Books should not be packed together so tightly, however, that they are difficult to remove without causing damage. Large, oversized books are best laid horizontally in stacks of no more than two or three high. Protective pads, such as squares of polyester felt, may be placed between stacked books to prevent them from rubbing.

Books on a shelf should be kept an inch or so back from the edge. The bare ledge of shelf will show up dust and droppings signaling insect activity. However books should not be pushed to the back of the shelf. Good air circulation is imperative to prevent stagnant air pockets where condensation will collect and mold will grow.

Important or fragile books may require additional protection. Check with a conservator about the variety of available solutions: polyester book jackets and wrappers, wrappers made of lightweight alkaline paperboard, double-tray boxes, and book shoes.

STORAGE

When books must be packed away for storage, do not wrap them in common household plastics (plastic kitchen wrap, garbage or cleaner bags) because these emit harmful gases as they degrade. Storage boxes made from alkaline corrugated cardboard designed for the purpose are available from conservation suppliers. Avoid storing boxes of books in attics, garages, or basements, where temperature and humidity fluctuations are great, where pests may be a problem, and where leaks or floods are common. Always allow at least four inches of space between the boxes and the walls, ceilings, and floors.

Many book materials are attractive to pests. Rats and mice, silverfish, and a host of smaller insects are common troublemakers. Watch carefully for signs of their presence. Vigilant housekeeping discourages them. If there is an infestation, consult a conservator.

HANDLING AND USE

Most books are not museum objects: their purpose is to be used and read. The handling of books, however, provides opportunities for accidental damage.

Handle books only with freshly washed hands. Most of the dirt on book covers and pages is accumulated grime from oily fingerprints. While invisible initially, finger grease becomes all too visible as it oxidizes and collects dirt. Wearing white cotton gloves for handling rare bindings is a good preventive measure, but turning fragile or brittle pages with gloves may cause damage and is not advised.

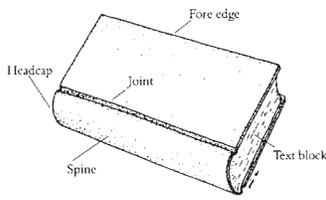
When removing a book from the shelf, do not pull it out by its headcap, which is apt to break. Either push the two neighboring books back in order to grab the spine in the middle, or stretch a finger along the top edge of the book and rock it back in order to grab the spine.

Avoid carrying tall, unstable stacks of books that may fall. If it is necessary to transport more books than can be held securely in two



A GUIDE FOR CLEANING, STORING, DISPLAYING, HANDLING, AND PROTECTING YOUR PERSONAL HERITAGE

BOOKS



“MOST BOOKS ARE NOT MUSEUM OBJECTS: THEIR PURPOSE IS TO BE USED AND READ”

hands, pack them snugly in boxes to prevent shifting and sliding. Never pack or shelf books fore edge down as this position suspends the entire weight of the book from its joints and pulls the text block out of its cover.

A book is designed to be cradled in the reader's hands or lap; in this position very little stress is put on its spine or joints. Placing a book flat on a table can put tremendous stress on the structure, flattening the spine and stretching the joints. If a book must be opened on a flat surface, protect both covers by placing a support, such as another book, on either side. Alternatively, cradle the book in a towel with the two ends rolled up to support the covers.

Similarly, never place an open book face down onto a flat surface, which forces the book open to a 180-degree angle. If a book must be photocopied, use a photocopier with an edge platform that requires only a 90-degree opening.

Other important tips: Use pencil, never pens (especially ball point and felt tip pens) on books as ink may run, bleed, or transfer onto other pages. Use only paper bookmarks, rather than metal or leather, which will tear or stain the pages. Avoid paper clips and other mechanical fasteners. Do not use the popular self-sticking memo slips as these leave an invisible residue of adhesive on the page to attract dirt. Avoid storing newspaper clippings, flowers, letters, or other miscellaneous material in books as they leave stains and stress the binding. And of course avoid eating, drinking, and smoking around books as the spills and stains are generally permanent.

CLEANING AND MAINTENANCE

Books and book collections need to be cleaned regularly to remove accumulations of dust and dirt and to monitor their condition.

When dusting the edge of a book, be sure to wipe away from the headcap toward the fore edge, with a clean cloth or soft brush. Dirt brushed down the spine of the book is trapped there forever. A vacuum cleaner can also be used with the suction reduced. Cheese cloth or soft screening can be tied over the nozzle as an extra precautionary measure to catch any loose bits that might accidentally break off. More difficult dirt often can be removed by rubbing gently with a white plastic drafting eraser. Brush away the crumbs with a soft brush.

In the past, leather books were often oiled to improve their feel and appearance. Unfortunately this can also cause stains, make the leather sticky, and degrade paper. Recent tests have shown that dressings are only cosmetic and do nothing to prolong the life of the leather. Consult a conservator before using dressings on books.

EMERGENCIES AND MINOR DISASTERS

If books get wet, the affected material needs to be stabilized as

rapidly as possible to avoid further damage. Mold growth is likely if the temperature is over 70 degrees and the relative humidity is over 60 percent for more than 48 hours. Wet books may be frozen to stabilize them; they can be thawed and dried at a later time. Wrap individual books in paper or interleave large numbers of books with paper. Pack each book's spine down in waterproof containers or cardboard boxes lined with plastic. Freeze the books as rapidly as possible in a commercial freezer, a home freezer (for a few books), or outdoors if conditions are right. There are commercial companies that specialize in the salvage and treatment of books in large-scale water disasters.

Small numbers of wet books can be air-dried. The books should be stood up, fanned open, alternating spine to fore edge, with sturdy bookends at each end to prevent them from falling over like dominoes. Use fans to circulate the air and increase evaporation. Drop the room temperature as low as practical to discourage mold and use dehumidifiers or air conditioners to reduce the humidity. Books are dry when they feel warm to the touch. Once dry, place them flat with a weight on top to minimize warping. Most books air dry satisfactorily although some residual staining and distortion is to be expected. Unfortunately, clay-coated (glossy) paper will stick together irreversibly unless the pages are separated while the book is still wet. Interleave every wet page with absorbent paper; repeat the process (exchanging the wet paper for dry) until the pages no longer cling to each other. Stand the book up and fan it open to finish drying completely.

WHEN TO CONSULT A CONSERVATOR

Problems that are beyond an owner's capabilities should be referred to a conservator. Visit AIC's Find a Conservator at www.conservation-us.org to find a qualified conservator in your area.

ABOUT AIC

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Documents, manuscripts, and works of art on paper such as prints, drawings, and watercolors are inherently fragile but can be easily and effectively protected from damage.

PROPER CARE AND HANDLING

Handle paper objects as little and as gently as possible. When doing so, be sure that your hands are freshly washed. Window mats provide maximum protection for works of art on paper because they allow items to be viewed and transported without direct handling. Unmatted artwork and documents are more vulnerable. Transport them in folders and remove individual items with both hands.

When consulting documents, place them flat and at least three inches away from the edge of the table on a clean blotter or sheet of paper. Fragile or frequently used documents may be placed in polyester sleeves for added protection; surrogate copies may be substituted for the originals for display or use.

Do not undertake repairs on your own and never apply pressure-sensitive (self-adhering) tapes to valuable documents or artwork. Use folders to organize documents rather than attaching paper clips, staples, or rubber bands—all of which can cause damage.

STORAGE

Because paper is damaged by prolonged contact with chemically unstable materials, the choice of materials for storage and exhibition is critical. Mats, folders, and storage boxes should be made of cotton rag or 100 percent chemically purified woodpulp with an alkali reserve equivalent to two percent calcium carbonate and buffered to a pH of 7.5 to 10. Matboard and folders should be rigid enough to provide adequate support. Store artwork in mats or within individual enclosures that are larger than the items. Documents in good condition may be stored in groups within folders; the number of items per folder depends upon their size, thickness, condition, and the depth of the folder. Isolate newsprint and other highly acidic materials by storing them separately. Individual enclosures offer the best protection for damaged and fragile items.

Store matted works or foldered items in flat files or in appropriately sized boxes specifically designed for storing

works of art or documents. Oversized objects should be stored flat whenever possible, not rolled or folded. They are best kept in the drawers of flat files (map cases), made of anodized aluminum or powder-coated steel.

If done properly with sound materials, matting and framing provides the best protection for art on paper. A brown cut edge at the window opening is a common sign of poor quality mat board. It is essential to choose a framer who uses proper materials and techniques. Adhesives used to attach the artwork to the mat must be chemically stable, non-staining, and readily removable. The essentials of proper matting and framing are described in a companion AIC guide, *Matting and Framing Works of Art and Artifacts on Paper*.

LIMITING LIGHT EXPOSURE

Exposure to light can cause fading of media, such as watercolor and writing inks. Such exposure can also yellow, darken, and weaken paper. Light damage is determined by the wavelength of the light, the length of the exposure, and the intensity of the illumination. Damage is cumulative and irreversible. Because all light causes damage, display works on paper for finite periods of time. Keep light levels low and eliminate daylight whenever possible. Block windows with shades, blinds, or curtains.

Light sources containing ultraviolet (UV) rays are especially harmful. UV is found in all daylight, most abundantly in sunlight, and in many fluorescent and metal halogen lamps. Incandescent or tungsten lights are preferred, but because they emit heat, place these light sources a distance from the artwork. UV filters to screen out UV radiation may be purchased for fluorescent tubes, windows, or cases.

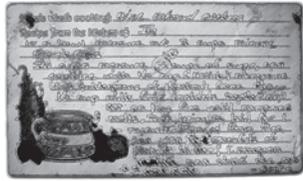
CONTROLLING TEMPERATURE AND RELATIVE HUMIDITY

Keep objects in a cool, dry environment. Maintain a temperature below 72 degrees Fahrenheit with relative humidity (RH) between 30 percent and 50 percent. Warm or moist conditions accelerate deterioration, and encourage mold growth and insect activity. Keep temperature and RH within a narrow, constant range. Climatic fluctuations cause papers to expand and contract. This movement, although



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DOCUMENTS AND ART ON PAPER



“DUST, SOOT, AND SOIL ARE DIFFICULT TO REMOVE SAFELY FROM DELICATE, POUROUS PAPER”

slight, can lead to structural weakening of paper, undermine the attachment of media, and cause distortions such as buckling of paper.

Frames and storage enclosures provide some degree of protection against daily fluctuations but will not protect paper from long-term or seasonal changes. Portable dehumidifiers can help control high levels of RH and fans that help circulate air can discourage mold growth. Humidifiers may be used in areas where extremely low RH occurs during the winter. Do not store works of art in basements or attics, or hang them in bathrooms or over heat sources.

LIMITING EXPOSURE TO GASEOUS POLLUTION AND AIRBORNE PARTICULATES

Pollutants from industrial gases, auto emissions, and heating sources are readily absorbed into paper and media and may form compounds detrimental to their stability. Dust, soot, and soil are difficult to remove safely from delicate, porous paper surfaces. Sources of indoor air pollution, such as ozone from copying machines and fumes from new construction materials, paint, new carpets, janitorial supplies, and wooden cabinets, can also degrade paper and media. One way to protect paper is to fully enclose each object in housing made with appropriate materials. Frames must be glazed and well sealed. Documents and unframed artwork should be protected by storage in folders within containers made of permanent durable material.

WHEN DISASTER STRIKES

Most natural or man-made disasters, such as floods or fire, involve water. Even a small amount of water from a leaky roof or pipe can do significant damage to a paper collection. When such a disaster occurs, contact a paper conservator, regional agency, or cultural institution for assistance. Immediate response within the first 48 hours is crucial to the successful salvage of materials and the prevention of mold growth.

WHEN TO CALL A CONSERVATOR

Some conditions require immediate attention. Wet or moldy materials or those with actively flaking media have high priority. If you notice pressure sensitive tapes and labels, brittle matboard, or changes in condition such as tears, detached hinges, or disfiguring stains, contact a conservator trained to address the special needs of works of art and artifacts on paper. Visit AIC's Find a conservator at www.conservation-us.org to find a qualified conservator in your area.

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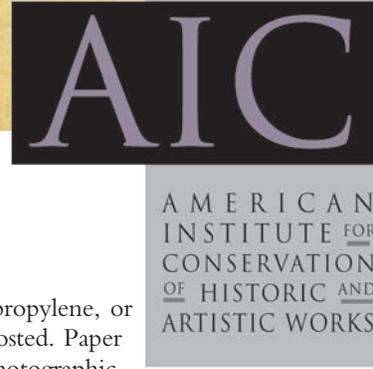
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A photograph can be one of many processes in which light-sensitive media are employed to create a visible image. The prevalence of photographs allows us to forget that they are potentially fragile objects that can be easily damaged by careless handling, improper storage, and exposure to environmental influences such as light, humidity, and temperature.

In caring for a photographic collection, it is important to know that various components comprise the structure of a photograph. The interaction of these components, with each other and with their environment, has a lasting effect on the longevity of the image. Most photographs consist of a final image material, a binder layer, and a primary support. The final image material—commonly silver, platinum, organic dyes, or pigments—creates the image we see. The binder layer is a transparent substance such as albumen, colloidion, or gelatin in which the final image layer is suspended. The binder and final image material are applied to a primary support, usually paper, glass, metal, or plastic. Although many photographs have this three-part structure, individual images may have additional components. For instance, color, coatings, original frames, and cases need to be considered as part of the photographic object.

MAINTAINING A SUITABLE ENVIRONMENT

Photographic materials benefit from a cool, dry, well-ventilated storage environment. High temperature and relative humidity increase deterioration and promote the growth of mold and mildew, which could mar surfaces and break down binder layers. Avoid storing photographs in the attic, the basement, or along the outside walls of a building where environmental conditions are more prone to extremes and fluctuations and where condensation may occur. In some storage situations, seasonal adjustments such as dehumidifiers or fans may be necessary to improve problematic environmental conditions.

The optimal storage conditions for most photographs are a temperature of 68°F and relative humidity in the range of 30–40 percent. Film-based negatives and contemporary color photographs benefit from storage in cooler environments of 30–40°F and 30–40 percent relative humidity.

CHOOSING STORAGE ENCLOSURES

Keep photographic materials in enclosures that protect them from dust and light and provide physical support during use. Chemically stable plastic or paper enclosures free of sulfur, acids, and peroxides are recommended. Plastic sleeves should be con-

structed of uncoated polyester, polypropylene, or polyethylene. They should not be frosted. Paper enclosures should have passed the Photographic Activity Test (PAT), a test designed to determine the safety of an enclosure in contact with a silver photographic image. If PAT test results are not available, choose paper enclosures that are lignin-free, 100 percent rag or alpha-cellulose fibers, and have a white or off-white color. Film-based negatives, which can produce acidic gasses as they age, should be stored separately from other photographic materials. Store cased objects, such as daguerreotypes and ambrotypes, in their original cases or frames with the addition of custom-made, four-flap paper enclosures to reduce wear and tear on fragile cases. Place individually housed prints, negatives, and cased objects in acid-free, durable boxes that will afford further protection.

The storage of photographs in albums serves the dual purpose of organizing groups of images while protecting them from physical and environmental damage. Albums can be wonderful sources of historic and genealogical information. Preserve them intact when possible and store them in custom-fitted archival boxes. Magnetic or self-adhesive albums can damage photographs and should not be used.

DISPLAYING PHOTOGRAPHS

Photographs should be protected from extended exposure to intense light sources. Limit exhibition times, control light exposure, and monitor the condition of the photographs carefully. Prolonged or permanent display of photographs is not recommended. Use unbuffered ragboard mats, and frame photographs with archivally sound materials. Use ultraviolet-filtering plexiglass to help protect the photographs during light exposure. Reproduce vulnerable or unique images and display the duplicate image; in this way, the original photograph can be properly stored and preserved.

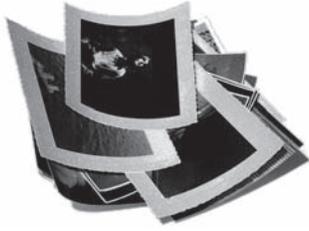
HOUSEKEEPING GUIDELINES

An overlooked area of collection maintenance is keeping the areas where photographs are handled or stored clean and pest-free. Paper fibers, albumen, and gelatin binders are just some of the components in photographic materials that provide an attractive food source for insects and rodents. It is vital that collection areas be free of debris that might encourage pests. Food and beverages should not be allowed. Apart from the potential for attracting pests, accidental spills can irreversibly damage most photographic objects.



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PHOTOGRAPHS



“MAGNETIC OR SELF-ADHESIVE ALBUMS CAN DAMAGE PHOTOGRAPHS AND SHOULD NOT BE USED”

HANDLING PROCEDURES

Most damage to photographs results from poor handling. A well-organized and properly housed collection promotes respect for the photographs and appropriate care in handling. When images can be located quickly, there is less possibility of physical damage. Establish handling procedures and adhere to them whenever photographs are being used. View photographs in a clean, uncluttered area, and handle them with clean hands. Wear clean white cotton gloves to lessen the possibility of leaving fingerprints and soiling the materials; however, be aware that gloves may reduce the manual dexterity of the user. Support photographs carefully and hold them with both hands to avoid damage. Keep photographs covered when they are not being viewed immediately. If it is necessary to mark a photograph, write lightly with a soft lead pencil on the reverse of the image. Do not use ink pens.

DISASTER PREPAREDNESS

Disaster preparedness begins by evaluating the storage location and the potential for damage in the event of a fire, flood, or other emergency. It is important to create a disaster preparedness plan that addresses the specific needs of the collection before a disaster occurs.

The location and manner in which photographs are housed can be the first line of defense. Identify photographic materials that are at higher risk of damage or loss. Remove all potentially damaging materials such as paper clips and poor-quality enclosures. Store negatives and prints in separate locations to increase the possibility of an image surviving a catastrophe. If a disaster occurs, protect the collection from damage by covering it with plastic sheeting and/or removing it from the affected area. If using plastic, make sure not to trap in moisture as this could lead to mold growth. Evaluate the situation and document the damage that has occurred. Contact a conservator as soon as possible for assistance and advice on the recovery and repair of damaged materials.

COMMON CONCERNS AND SOLUTIONS

The following problems are commonly encountered in photographic collections:

Broken, torn, or cracked photographs: If the primary support of a photograph sustains serious damage, place it carefully in a polyester sleeve with an archival board support. If the photograph has a flaking binder layer or friable surface components, such as the pastel coloring often seen on crayon enlargements, place it in a shallow box, not a polyester sleeve. Do not use pressure-sensitive adhesive tapes to repair torn photographs.

Soiled photographs or negatives: Do not clean photographs with erasers. Brush soiled photographs carefully with a clean, soft brush. Proceed from the center of the photograph outward toward the edges. Do not attempt to clean photographs with water- or solvent-based cleaners, such as window cleaner or film cleaner. Improper cleaning of photographic materials can cause serious and often irreversible damage, such as permanent staining, abrasion, alteration, or loss of binder and image.

Photographs or negatives adhered to enclosures: High-humidity environments or direct exposure to liquids can cause photographs to adhere to frame glass or enclosure materials. This is a very difficult problem to resolve, and great care must be taken to reduce the possibility of further damage. If a photograph becomes attached to adjacent materials, consult a photographic materials conservator before attempting to remove the adhered materials.

Deteriorated negatives: Chemical instability is a major factor in the deterioration of early film-based materials. If film-based negatives are brittle, discolored, sticky, or appear wavy and full of air bubbles, separate the negatives from the rest of the collection and consult a photographic materials conservator.

Broken glass negatives or ambrotypes: Place broken glass carefully in archival paper enclosures. Use a separate, clearly marked enclosure for each piece to reduce the possibility of scratching or further damage. For long-term storage, construct a custom sink mat that holds the pieces of broken glass, separated by mat-board shims, in one enclosure.

WHEN TO CONSULT A CONSERVATOR

If your photograph requires special attention or you are unsure about how to protect it, you should contact a conservator. AIC's Find a Conservator at www.conservation-us.org can direct you to a qualified conservator in your area.

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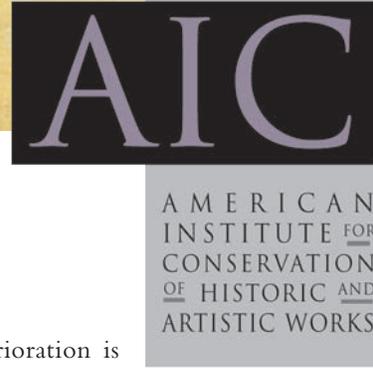
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Since the late 1950s, video has served as a powerful medium of artistic expression and visual documentation, capturing and portraying events that shape our lives and our perception of the world. Today, video camcorders are used frequently to document momentous events in the life of a family—the birth of a child, high school graduation, summer vacations, and weddings.

Unfortunately, as an information storage medium, videotape is not as stable as photographs. Videotape is fragile—subject to damage and deterioration from exposure to poor environmental conditions and inadequate handling practices. Even if properly cared for, magnetic tape may last for only a few decades.

COMPOSITION

Videotape is composed primarily of three components: magnetic (metal oxide) particles, a polyurethane-based binder, and a polyester base material.

The metal oxide particles record and store magnetic signals. Magnetic particles differ greatly in their stability. Changes in the magnetic properties of these materials may result in an irretrievable loss of color, saturation, and sound clarity.

The polyurethane binder holds the magnetic particles in place. Often the binder also contains special lubricants to smooth passage of the tape across the recording and playback devices. The binder is subject to a type of chemical deterioration known as hydrolysis, which can make the videotape sticky and soft and cause magnetic particles to shed from the base (referred to as sticky shed syndrome) and clog recording heads. Playback is impossible.

The polyester base material provides a flexible support but is also susceptible to physical deformations due to excessive tape pack stresses and poor wind quality. These deformations can result in mistracking when the tape is played. A back coating, if present, reduces static electricity and aids in keeping the tape securely wound when in storage. The backcoat also serves to reduce tape friction and helps prevent tape distortion by providing a more uniform tape pack wind.

All components are subject to irreversible deterioration caused by exposure to extremes of temperature and humidity as well as physical damage due to poor handling and storage practices.

ENVIRONMENT

The best way to prevent deterioration is to store all videotapes in an environment that does not fluctuate significantly in temperature or relative humidity. High temperature, high humidity, and the presence of dust and pollutants in the air will result in irreversible loss of both video and audio signals.

A dust-free, temperature- and humidity-controlled environment—68 degrees Fahrenheit and 20 to 30 percent relative humidity—is recommended for the safe home storage of videotape.

Never keep videotapes in a hot, wet environment or expose them to direct sunlight. Storage at high temperatures (in an attic or on windowsills) may result in tape-to-tape adhesion (known as blocking), degradation of the binder (known as shedding), and permanent distortion of the tape backing. Such degradations can lead to severe image deterioration (known as dropouts). In video recordings, short-duration dropouts appear as flashes, white spots, or streaks. Storage at high humidity (in a basement or garage) may cause fungal growth.

HANDLING

Minimize tape handling at all times. Take care not to drop tapes or cassettes. Do not touch the surface or the edge of the tape.

Avoid contamination of the tape by dirt, dust, food, cigarette smoke, and airborne pollutants. Cleanliness is important because minute debris can cause loss of signal or dropouts. The frequent appearance of dropouts is an indication that the videotape playback device is contaminated with dirt and/or that the tape is deteriorating.

STORAGE

When tapes are not in use, store them on end (like books on a library shelf) to prevent deformation. Do not store videotapes lying flat. When housed in a horizontal position, pressure from other tapes can cause distortions. Rewind tapes after recording or playback.

A tape must not be left threaded in the video recorder for a long period. Leaving a tape in the playback machinery overnight, for example, is not desirable. Likewise, tapes should be



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HOME VIDEOTAPE



“CLEANLINESS IS IMPORTANT BECAUSE MINUTE DEBRIS CAN CAUSE LOSS OF SIGNAL OR DROPOUTS”

inserted and ejected only at blank, unrecorded sections. Never eject a tape in the middle of a recording. Pausing tapes for prolonged periods also results in degraded image quality. After recording, rewind the tape before ejecting it.

Always return tapes to carefully labeled protective inert plastic containers when they are not in use. Cardboard boxes deteriorate over time and provide little protection from handling, environmental fluctuations, fire, or water.

Date and subject matter is crucially important to determining the contents of a videotape. All labels should be consistent and on both the outer box and the cassette itself (use of the adhesive labels that come with the videotape are safe).

Videotapes, especially modern ones, are recorded with high levels of magnetic energy that make them relatively immune to problems from common household magnetic fields. Weak magnetic fields are produced around electrical appliances, power tools, and television sets. However, it is good practice to avoid exposing tapes to any magnetic fields. A few feet separation from a magnetic source will usually provide sufficient protection.

PLAYBACK DEVICES

Playback devices must be cared for and cleaned regularly following recommended maintenance procedures. Protect VCRs with a dust cover. Dirt in the tape path through the machine can permanently scratch the videotape's surface.

RECORDING PRACTICES

Always use a new, brand-name tape from a recognized manufacturer for important recordings. Avoid extended-play tapes because they use a thinner polyester tape base and, therefore, are less wear resistant. Before recording it is good practice to wind the tape from one hub to another and then back. This procedure will relieve stresses on the tape that could result in a slightly irregular passage of the tape through the recorder. Record at standard speed. Always break off the tab on a videocassette to prevent accidental re-record. Make protection copies of the most valuable videotapes and keep them in a separate location.

DISASTER SITUATIONS

When disaster strikes, it can leave a single tape or an entire collection unusable. For this reason, videotapes must be well protected from damage by fire or water. Magnetic tape cannot tolerate high temperatures. Temperatures above 150

degrees Fahrenheit can cause permanent damage to videotape. Experience, research, and testing have led to the development of highly effective restoration and remastering techniques that may preserve lost or damaged information in the event of a disaster.

RESTORATION AND CONSERVATION

Deteriorated tapes may require duplication onto a new tape stock (called reformatting). This is especially true if the original recording was done on a type of machine that is no longer in production (like Sony Betamax). Tapes that are ten years old or older or that have been poorly stored and improperly handled are a high priority for restoration. Restoration is the process by which a videotape, degraded by age, is temporarily or permanently transcribed to a playable condition. The restoration process usually requires highly technical methods and materials. After preservation recopying has been completed, the original video should be stored and not discarded.

Unfortunately, most analog home videotape formats have some sort of image degradation when they are copied. For especially important videotapes (for instance, unique recordings of special events), consider making a copy onto a professional format.

WHEN TO CONSULT A CONSERVATOR

Professional conservators are skilled in many of the preventive preservation techniques that can prolong the life of your videotape. Conservators will also provide information on restoration and conservation services that may be required for videotapes that are severely damaged or obsolete. AIC's Guide to Conservation Services at www.conservation-us.org can direct you to a qualified conservator in your area.

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CARING FOR YOUR TREASURES



Paintings are fragile creations that require special care to ensure their continued preservation. Paintings consist of various layers. The paint is applied to a support, typically canvas or wood, which is usually first primed with a glue-sizing and/or ground layer. Traditional paintings are finished with a coat of varnish. Contemporary paintings, naive, or folk art may not have a ground layer or varnish coating. Paintings that do not have all of the traditional layers may be more fragile and susceptible to change or damage.

The paint layers can be made of pigments in oil, acrylic (or other synthetics), encaustic (wax), tempera (egg), distemper (glue), casein (milk), gouache (plant gum), or a mixture of media. The paint can be applied on a wide variety of supports. Although the most common are canvas and wood, other supports include paper, cardboard, pressed board, artist's board, copper, ivory, glass, plaster, and stone. Paintings on canvas are usually stretched over an auxiliary wood support. An adjustable support is called a stretcher; a support with fixed corners is called a strainer. Paintings change over time. Some inevitable results of aging, such as increased transparency of oil paint or the appearance of certain types of cracks, do not threaten the stability of a painting and may not always be considered damage. One of the most common signs of age is a darkened and/or yellowed surface caused by accumulated grime or discolored varnish. When a varnish becomes so discolored that it obscures the artist's intended colors and the balance of lights and darks, it usually can be removed by a conservator, but some evidence of aging is to be expected and should be accepted. However, when structural damages or unstable conditions occur in a painting such as tears, flaking paint, cracks with lifting edges, or mold, consult a conservator to decide on possible courses of treatment for your painting.

SUITABLE ENVIRONMENT

It is important to maintain a proper environment for your paintings. The structural components of a painting expand and contract in different ways as the surrounding temperature and humidity fluctuate. For example, the flexible canvas may become slack or taut in a changing environment, while the more brittle paint may crack, curl, or loosen its attachment to the underlying layers. Paintings generally do well in environmental conditions that are comfortable for people, with relative humidity levels between 40 and 60 percent.

Environmental guidelines have been developed for different types of materials. Paintings on canvas may react more quickly to rising and falling humidity levels than paintings on wood panels,

but the dimensional changes that can occur in a wood panel can result in more structural damage. Owners of panel paintings should be particularly conscientious about avoiding unusually low or high relative humidity and temperatures to prevent warping, splitting, or breaking of the wood. Museums strive to maintain constant temperature and humidity levels for works of art, but even with expensive environmental control systems this task can be difficult. In most cases, gradual seasonal changes and small fluctuations are less harmful than large or rapid environmental fluctuations. Avoiding large fluctuations is very important.

One of the simplest and most important preservation steps you can take is to have a protective backing board attached to paintings. A Fome-Cor (or archival cardboard backing) secured to the reverse of a painting with screws (not staples or tacks) will reduce exposure of the canvas to rapid environmental changes, keep out dust and foreign objects, and protect against damage during handling. Be sure that the backing board covers the entire back of the picture; do not leave air vent holes, which can create localized environmental conditions and lead to cracks in paint. The backing board should be attached to the reverse of the stretcher or strainer, not to the frame. Have a conservator or reputable framer attach it for you.

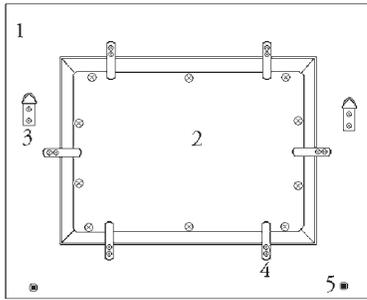
DISPLAYING PAINTINGS

The display of paintings requires careful consideration. Direct sunlight can cause fading of certain pigments, yellowing of varnish, and excessive heating of the paint surface. If paintings are placed on uninsulated exterior walls, it may help to place small rubber spacers on the back of the frame to increase air circulation. Although a fireplace is often a focal spot for a room, a painting displayed above a mantel will be exposed to soot, heat, and environmental extremes. Hanging paintings above heating and air conditioning vents or in bathrooms with tubs or showers is also inadvisable because the rapid environmental fluctuations will be harmful. Select a safe place away from high traffic areas, moveable seating, or other hazards. When lighting paintings, use indirect lighting. Lights that attach to the top of the frame and hang over the picture can be dangerous. These lights cast a harsh glare, illuminate and heat the painting unevenly, and can fall into the artwork causing burns or tears. Indirect sunlight, recessed lighting, or ceiling-mounted spotlights are best for home installations.



A GUIDE FOR CLEANING, STORING, DISPLAYING, HANDLING, AND PROTECTING YOUR PERSONAL HERITAGE

PAINTINGS



Reverse of Properly Framed Painting: (1) Back of a traditional picture frame (2) Backing board attached to stretcher with screws and washers (3) "D" rings to hang painting (4) Brass mending plates screwed into frame to secure the painting (5) Rubber spacers for air circulation



“ A PAINTING DISPLAYED ABOVE A MANTEL WILL BE EXPOSED TO ENVIRONMENTAL EXTREMES ”

HANDLING PROCEDURES

Pictures are usually safest when hanging on a wall, provided that they are well framed, with the picture and hanging hardware adequately secured. If you must store a painting, avoid basements, garages, and attics. A good storage method is to place the paintings in a closet with a stiff board (cardboard or Fome-Cor) protecting the image side of each artwork and a backing board attached to the reverse. Do not risk damaging your paintings by moving or touching them any more than is absolutely necessary. If you must remove a painting from the wall or move it to another room, clear the pathway of furniture and obstructions and prepare a location to receive it. The frame must be stable and secure; if it is old or there is glazing (glass), ensure that it can withstand being moved. If the frame is massive or the picture is wider than your shoulders, ask someone to help you. If the painting is of a manageable size, lift the frame with both hands by placing one hand in the center of each side. Always carry it with the image side facing you. Remove jewelry, tie clips, belt buckles, or other clothing that might scrape the surface.

Hang paintings from picture hooks (not plain nails) placed securely in the wall; a heavy picture requires two hooks. Before hanging, examine the back of the painting to ensure that the hanging hardware is strong and secure. If the painting is framed, the hardware should be attached to the back of the frame, not to the stretcher or strainer. If picture wire is used, attach a double strand of braided wire to the sides of the frame (not to the top edge) with "D" rings or mirror plate hangers (see diagram above). These types of hangers are secured to the wooden frame with two to four screws. Hanging can be more complicated with contemporary paintings that do not have protective frames. Moving and hanging unframed or large paintings safely may require the services of professional art handlers.

FRAMING

If you intend to buy a new frame for a painting or have a painting treated by a conservator, take the opportunity to have it framed properly. Ideally, a painting should be held in the frame with mending plates that are attached to the frame with screws. Brass mending plates can be bent and adjusted so there is light pressure on the back of the stretcher or strainer. Although nails are often used to frame paintings, nails are not recommended because they can rust, fall out, or protrude through the canvas. Ask the framer or conservator to pad the

rabbit, the part of the frame that touches the face of the painting, with felt or another suitable material to protect the edges of the image.

HOUSEKEEPING GUIDELINES

After carefully examining your paintings for loose or flaking paint, dust them every four to six months. Feather dusters can scratch or snag on paintings. Instead use a soft bristle brush, such as a white-bristle Japanese-type, sable (such as a typical makeup brush), or badger-hair brushes (called "blenders" and used for faux finishes). Never try to clean a painting yourself or use any liquid or commercial cleaners on a painted surface. Commercial preparations can cause irreparable damage to the fragile layers of a painting. Avoid touching the surface of paintings with your fingers. The natural oils in your skin can also cause damage or leave marks that may appear later. Avoid using pesticides, foggers, air fresheners, or furniture sprays near artworks. Remove paintings from a room before plastering, painting, or steam-cleaning carpets or wallpaper. Return the artworks only when the walls and floors are completely dry.

WHEN TO CONSULT A CONSERVATOR

If your painting requires special intervention, you should contact a paintings conservator. They will give you advice about the safest means by which to conserve and restore your special items. Visit AIC's Find a Conservator at www.conservation-us.org to find a qualified conservator in your area.

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CARING FOR YOUR TREASURES



MATTING AND FRAMING WORKS OF ART AND ARTIFACTS ON PAPER

Works of art and documents on paper are vulnerable to physical damage. They are easily torn, folded, and smudged. Works of art and documents on paper are also susceptible to chemical damage by components in paperboard and adhesives used to mat works of art and documents. The purpose of this brochure is to provide information about recommended materials for matting and framing and to indicate those materials to avoid. Choosing appropriate mat board, hinges, glazing, and backboard will help to protect and preserve the works in your collection. The use of chemically unstable products can result in damage to the art or documents that they are intended to protect.

MAT BOARDS

Many of the mat boards available for framing purposes are of poor quality. The acidic content of these inferior boards can cause paper to become brittle and darken. In poor quality mat boards, the core of the board darkens as it ages. When this exposed core of the board comes into direct contact with the matted work at the window opening or at the edges, an orange-brown line of staining, known as “mat burn” occurs. To prevent this problem, use chemically stable materials for both the window mat and the back mat. Ask for mat boards that are alkaline, and made fully from cotton rag or 100% chemically purified wood pulp. Chemically stable boards generally have an alkaline reserve (often referred to as a “buffer”), incorporated to neutralize acidity from atmospheric pollutants and from the artifact itself. Some photographic and printing processes are “alkaline sensitive” and may be adversely affected by buffered materials. In these cases, pH neutral “unbuffered” materials may be more appropriate. Look for materials that explicitly meet the International Organization for Standardization specifications for enclosures.

HINGES

Japanese paper hinges are used to attach a work on paper to its back mat. These hinges are attached to the reverse of the work with a cooked, highly-purified wheat starch paste. They secure the top edge of the work to the mat, while still allowing the paper to expand and contract freely in response to changes in its environment. Directly adhering the corners of the work to

the back mat without hinges can cause staining, buckling, or tears in the paper support. Another method of hinging uses “photo-corners”—triangular sleeves of paper or inert plastic film—placed over the object’s corners and adhered to the backmat. No adhesive is applied to the artifact when using “photo corners,” facilitating its removal from the backmat, if necessary. Avoid methods of attaching works of art to backmats such as dry-mounting, lamination, spray mount, rubber cement, or pressure sensitive tapes (e.g., masking, office, or even those referred to as “archival” or “preservation” tapes). The adhesives in these materials can seep into paper, become discolored, brittle, and be difficult to remove.

BACKING BOARDS

The backing board is a rigid sheet of chemically stable board placed behind the backmat in the frame. It is stiff enough to hold the contents of the frame in place without bowing when displayed. These boards should be made from chemically stable papers or plastics and occur in such formats as corrugated, honeycombed, and foam boards. To minimize the effects of pollutants and changes in relative humidity, some conservators recommend the placement of a layer of impermeable material, such as polyester film (e.g., Mylar Type D) or a plastic-aluminum laminate (such as Marvelseal), between the backmat and the backing board, or outside the backing board.

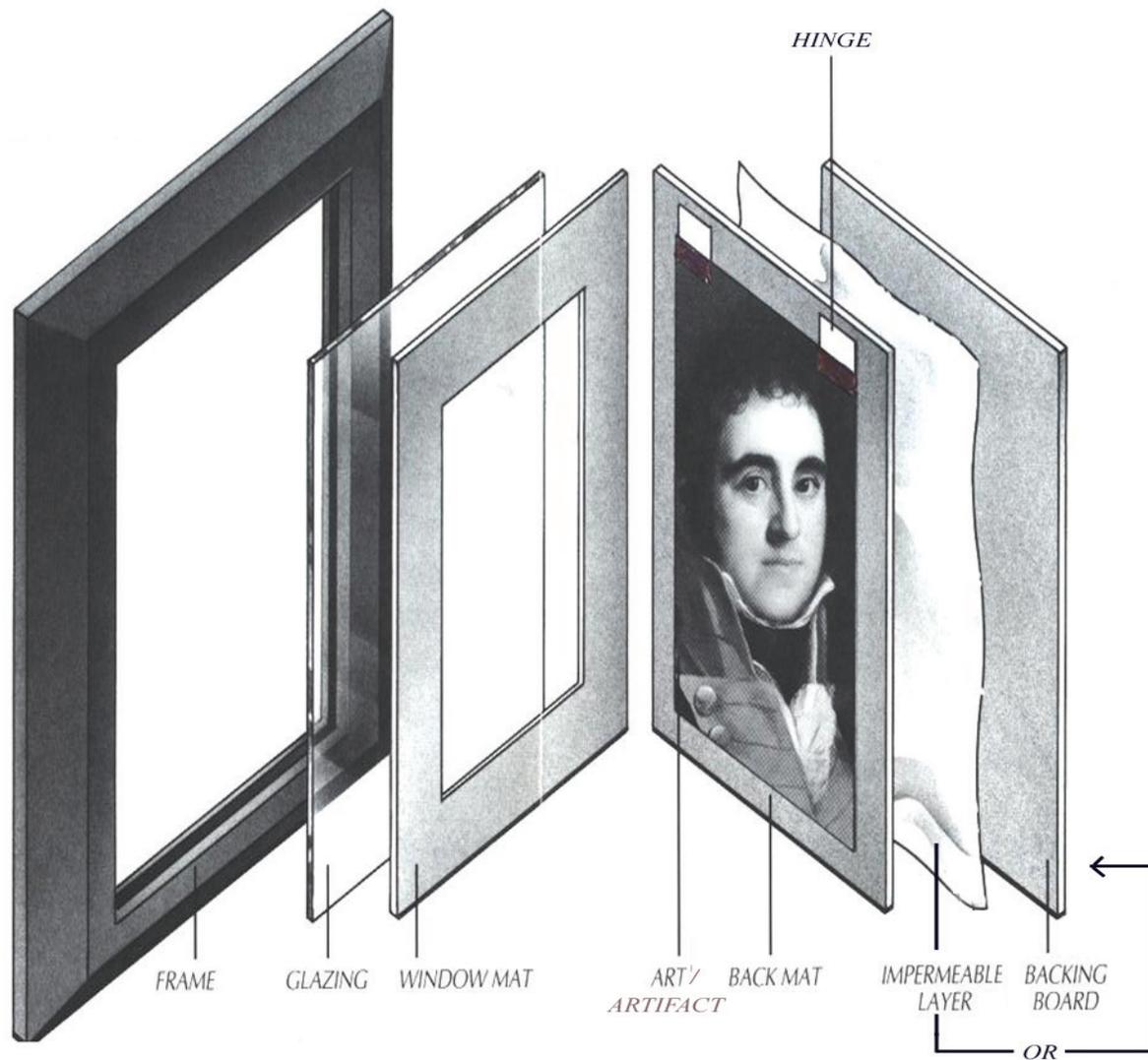
GLAZING MATERIALS

Glazing protects the surface of the work of art and prevents the infiltration of dirt and dust. The two most common glazing materials are glass and acrylic sheet. Plastics other than acrylic may be unstable and are to be avoided. An acrylic sheet weighs less than glass and is shatterproof. Although acrylic tends to scratch, scratch resistant grades are available. Because acrylic has a static charge, use glass when glazing powdery materials such as pastel, chalk, and charcoal. Whether you choose glass or acrylic, always be sure that the glazing material does not come into direct contact with the surface of the artifact. Prolonged contact of the glazing with the surface of the artifact can result in its adhesion to the glazing, or can cause surface changes in the work. A thick mat or a spacer in the frame will keep the artifact from touching the glazing. Glazing that filters ultraviolet radiation can help reduce the fading of colors or darkening of paper.



A GUIDE FOR CLEANING, STORING, DISPLAYING, HANDLING, AND PROTECTING YOUR PERSONAL HERITAGE

MATTING AND FRAMING



Both glass and acrylic sheet that filter out ultraviolet radiation are available. Works glazed with ultraviolet filtering materials can still be damaged by high light levels and long periods of exposure. Limit the quantity of light and the duration of exposure to light to minimize damage to documents and works of art on paper.

SUMMARY

- Have items matted with chemically stable window and back mats. (At least 4-ply in thickness; alkaline; pH 7.5 to 10; 100 percent cotton rag or chemically purified woodpulp)
- Ensure that mats are always larger than the item being matted.
- Have the window and back mat attached along the top or left edge (which ever is longer) with gummed linen tape. (The gummed linen tape touches ONLY the mat board, not the object.)
- Have the work hinged to the back mat with Japanese paper and wheat starch paste or with photocorners as a primary means of attachment.
- Select an appropriate glazing material to be placed in the frame in

front of the matted work. Include additional spacers as needed to separate matted work from contact with the glazing material.

- Have chemically stable backing board placed into the frame behind the matted work.
- Have a dust seal placed on the very back of the frame. Dust seals may be made from chemically stable paper or polyester film.

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CARING FOR YOUR TREASURES



Throughout human history, textiles have played a rich part in the lives and traditions of people of all cultures. They have been constructed using a wide variety of materials and techniques—from natural fibers such as cotton, silk, flax, and wool to regenerated or manufactured fibers such as rayon, nylon, and polyester.

Textiles can be simple in structure and composition or can be part of complex composite objects that incorporate other materials like paper, leather, glass, metals, paint, stone, horn, bone, shell and feathers.

Contemporary household furnishings, clothing, many fashion accessories, and even fragmented archaeological finds are all textiles. Textiles, such as quilts, tapestries, embroideries, flags, and christening gowns are often treasured for their artistic, technical, cultural, and sentimental value.

Most textiles, at some time in their history, have served as functional objects. This history of use, along with environmental and handling factors, can affect a textile's condition, resulting in the need for special care to ensure its long-term preservation. Making careful and informed decisions regarding the handling, display, and storage of a textile can make the difference between a short life span and a textile's preservation for future generations.

ENVIRONMENT

The deterioration of textiles is often due to a combination of physical, biological, and/or chemical factors working together to cause damage. Inappropriate lighting; improper temperature and relative humidity levels; excessive dust, dirt, and other pollutants; insects; mold and mildew; and incorrect handling all contribute to damage.

LIGHT

Both natural and artificial light can fade color and contribute to the degradation and permanent damage of many textile fibers. The rate at which damage occurs is determined by the level of illumination and the duration of exposure. And, unfortunately, light damage is cumulative and irreversible. If long-term preservation is a concern, protecting textiles from light exposure is key. To this end, several simple and practical steps can be taken: keep draperies drawn to protect textiles from strong, direct light; use ultraviolet light filtering glazing when framing textiles for display; and install ultraviolet light filtering films on windows and over other light sources. Keep in mind, however, that all types of light damage textiles. The risk of light damage can be further minimized by periodically rotating your

textiles on and off display.

TEMPERATURE AND RELATIVE HUMIDITY

High temperatures speed up the rate of many chemical reactions, and as a result, speed up the rate at which damage can occur in fibers, dyes, and other component materials of textiles. For this reason, textiles are best stored and displayed as far away from heat sources (fireplaces, spotlights, windows, etc.) as possible. Areas inclined to high temperatures (above 80°F) and those subject to sudden or great temperature changes, such as unfinished attics and basements, are not appropriate for the safe storage of textile artifacts.

Relative humidity is a measure of the amount of moisture in the air. Because many organic materials contain moisture, fluctuations in temperature and relative humidity can cause these materials to expand and contract as they take in or lose moisture. A painted silk banner, for example, can be adversely affected when the pigment and binder in the painted design do not expand and contract at the same rate as the fibers in the silk fabric. As a result, the paint layer will tend to crack and flake off. Other potential problems associated with high relative humidity are mold and mildew, the corrosion of metals, and the bleeding of some dyes. Relative humidity is best maintained at a constant level between 35 and 65 percent.

POLLUTION AND AIRBORNE SOILING

Smog, car exhaust, and ozone are common pollutants that can cause physical and chemical damage. Textiles are particularly susceptible to abrasion and physical damage caused by dust and other gritty particulate surface soiling. Eliminating exposure to these contaminants is an important aspect of preventive conservation care. The use of particulate air filters and protective display and storage enclosures is recommended when planning for the long-term preservation of textiles.

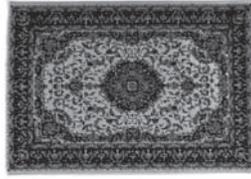
DISPLAY AND STORAGE

Textiles are best preserved when displayed and stored in clean, well-ventilated areas that are routinely and adequately maintained. Controlling dust, clutter, and other accumulations of extraneous material will greatly reduce the possibility of damage caused by insects, rodents, and microorganisms such as molds and fungi. Inspect your textiles often, ideally at six-month intervals, to identify problems early on. Indications of active deterioration are an increase in textile discoloration, tarnishing of metal components, and the presence of a



A GUIDE FOR CLEANING, STORING, DISPLAYING, HANDLING, AND PROTECTING YOUR PERSONAL HERITAGE

TEXTILES



“ MOST TEXTILES BECOME WEAKER WHEN WET AND WILL NEED SUPPORT FOR SAFE HANDLING ”

sweet or musty odor. Signs of insect infestation include small, irregularly shaped holes, and/or the presence of insect casings and excrement.

Controlled vacuuming can be an effective means of reducing dust and other particulate soiling, though not all textiles, can be safely vacuumed. There are various methods of vacuuming depending upon a textile's condition, component materials, and method of construction. Specially-modified equipment allowing for low suction is often necessary for vacuuming to be accomplished safely. For large or sturdy textiles, vacuuming with an up and down motion (lifting, not dragging the vacuum nozzle) over a protective sheet of flexible plastic screening may be recommended. For fragile three-dimensional textile artifacts, dusting lightly with a soft brush into a specially-modified low-suction vacuum nozzle may be preferable. Contact a professional conservator to discuss appropriate techniques before you begin.

HANDLING

Proper handling is important for the long-term preservation of textiles. Textiles are frequently more fragile than they first appear. Before attempting to handle or move a textile, familiarize yourself with its weak areas. Physical damage can occur suddenly as a result of even careful handling. Support a textile in a manner that distributes its weight evenly. A delicate silk embroidery may be supported by sliding a piece of paper or cardboard underneath, while a heavier textile such as a carpet or tapestry is best rolled on a large tube or carried in a fabric sling.

Clean hands are important when handling textiles, as human skin contains oils and perspiration. Refrain from using skin creams as they may be readily absorbed by textile fibers and later contribute to staining. Wash your hands frequently or wear inexpensive white cotton gloves that are available through photographic and conservation suppliers. Remove jewelry or anything that may snag and be careful not to rub or drag your hands against the textile. Be aware that yarns and fibers can be easily pulled, frayed, and weakened depending upon the textile's condition, its component materials and method of construction.

HOUSING: FRAMING, DISPLAY AND STORAGE

The materials used in frames and storage enclosures must be carefully selected to ensure a protective and stable environment. Most wood, packing cardboards, and some plastics are chemically unstable. Use archivally-stable materials such as barrier films, acid-free unbuffered matboards and paperboards, rolling tubes, and storage boxes that are available through conservation supply catalogues and at some art supply stores instead. Contact your local museum for sources near you.

DISASTERS

The two most common forms of disaster damage are those caused by water and fire. Prompt attention to textiles following a disaster can

greatly reduce the likelihood that they will suffer permanent damage.

In the case of wet artifacts, remember that most textiles become weaker when wet and will need support for safe handling and transport. If handling is possible, separate colored textiles from others to reduce the risk of dye transfer. Rinse any silt or debris off with clean, cool water, then blot the textiles carefully with absorbent toweling to remove as much moisture as possible. Lay the textiles flat to dry in a room with good air circulation. Cover them with clean, thin, cotton sheets to absorb impurities and provide protection during drying. If the water-damaged textiles are already dry, deposited soiling may often be removed with a soft brush and special low-suction vacuum, as previously described.

When there are too many water damaged textiles to dry immediately, it is advisable to contact a conservator or local museum for advice. It may be possible to freeze the wet textiles to prevent mold growth and arrest bleeding dyes. Arrangements can then be made to examine and dry the textiles under controlled conditions.

Fire, soot, and smoke damage pose special problems for textiles. It is always advisable to contact a conservator before handling a soot-damaged artifact. Handling can irreversibly drive sooty surface soiling deep into the fibers of a textile. The use of ozone to remove smoky and/or mold and mildew odors from a textile is not recommended as ozone will accelerate aging and degradation in many textile artifacts.

WHEN TO CONSULT A CONSERVATOR

Before attempting to repair, clean, or mount a textile artifact, contact a professional textile conservator for advice. The conservator will examine your textile, evaluate its composition and method of manufacture, document its condition, and make note of inherent problems and areas of damage. A treatment option will then be proposed, taking into account your concerns and any relevant historical information.

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HOW TO PROTECT YOUR FURNITURE

Many owners of old furniture may only start to think about its condition when something they own is damaged. However, routine maintenance can prevent damage from occurring, enhance the furniture's monetary value, and prolong its useful life. In order to take proper care of furniture, it is important to understand that it is composed of a variety of materials, including metal, bone, plastic, shell, leather, and fabric, as well as paints and natural and synthetic resins. All these materials must be taken into account to care for and maintain furniture properly.

STORAGE AND DISPLAY

The environment can have a profound effect on the preservation of furniture. Light, particularly visible and ultraviolet (UV) light, is very damaging to organic materials such as wood, and damage from light is cumulative and irreversible. Clear finishes often turn yellow or opaque in response to light, and the color or cellular structure of the wood itself can also change. The resulting damaged finishes and bleached wood cannot be restored to their original color without stripping and refinishing, a practice not recommended as loss of the "patina," or evidence of use, can negatively affect the furniture's monetary value.

To limit the effects of light, move all furniture out of direct sunlight, and utilize blinds or curtains to block the light's intensity. UV light, which is particularly damaging to wood and fabrics, can be screened out by applying a UV-filtering film to windows.

Furniture can also be affected by the amount of moisture in the air. Wood and other organic materials respond to changes in relative humidity (RH) by expanding or contracting as they try to maintain equilibrium with the moisture in the environment. Ideally, RH levels should be maintained within a 40 and 60 percent range. If the RH is too high (above 70 percent), wood and other materials expand. If they are constrained in any way, they may split upon shrinking when the RH drops to a lower level. Changes in RH can even cause a coating to detach. A prolonged high humidity environment will also promote the possibility of mold growth and insect infestation. To prevent damage, place furniture in areas of minimum temperature and RH extremes. Avoid storing furniture in attics and basements or placing pieces near fireplaces and heating vents.

Monitoring temperature and RH in an environment can be done with thermometers and hygrometers purchased at electronic or hardware stores and the RH can be modified to stay within acceptable ranges through the use of humidifiers and dehumidifiers.

INSECT ACTIVITY

A common furniture pest is the powderpost beetle, less than a quarter-inch long, which lays its eggs in small crevices. The insect larvae burrow into the wood, creating networks of tunnels as they eat their way along the grain. As they mature to adults, they bore out of the wood leaving an "exit" or "flight" hole and fly off to lay their eggs, completing the cycle.

If flight holes are observed in furniture, it is important to determine if the infestation is active. Active flight holes are light-colored and contain a fine, sawdust-like material called frass. Any material resembling sawdust that appears on the floor underneath a piece of furniture could be a sign of a possible infestation. Frass from an infestation that is no longer active can be dislodged if furniture is moved or jostled, giving an impression of insect activity, but should frass continue to appear after being swept away, it is likely that the infestation is active. If furniture or other wooden objects appear to have active infestation, they should be isolated immediately by placing them in a large sealed plastic bag. As fumigation may be the next step—and there are a variety of methods available to accomplish this end—a conservator, or exterminator familiar with conservation issues, should be called immediately.

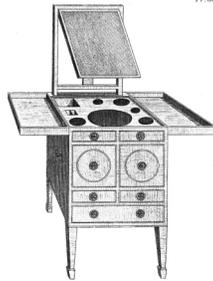
CLEANING AND HANDLING

It was once thought that furniture needed to be "fed" with various mixtures of oils and other materials to keep it from drying out. However, a better approach would be to keep furniture in a stable environment. Furniture oils are not recommended for maintenance as many of them contain linseed oil or other drying oils, and when used repeatedly will create a gummy, insoluble surface coating that darkens and obscures the grain of the wood. Other furniture polishes contain non-drying oils such as lemon oil, but attract and entrap dirt and grime. Silicone polishes are also not recommended as they leave a film that is difficult to remove and can interfere with future finish treatments.



A GUIDE FOR CLEANING, STORING,
DISPLAYING, HANDLING, AND
PROTECTING YOUR PERSONAL HERITAGE

FURNITURE



“ THE PRIMARY GOAL OF ANY TREATMENT SHOULD BE TO MAINTAIN THE PATINA OF AGE ”

The best maintenance for clear-varnished furniture is a coating of good paste wax. Wax is a very stable material that does not change chemically over time and provides protection from moisture and airborne pollutants. Good quality paste wax is available in most hardware stores. A thin coat applied following the directions on the can is all that is needed, no more than once a year. It may not be appropriate to wax furniture that is gilded, painted or lacquered, or furniture that has unstable veneers or flaking finish. Consult a conservator if any question about the appropriateness of waxing arises.

Once a protective coat of wax has been applied, dry dusting with a soft cloth is recommended for routine cleaning. Dust and dirt are harmful to finished surfaces and should be regularly removed as they can scratch or otherwise damage polished surfaces. A soft cotton cloth or artist's brush is best for dusting. Feather dusters are not recommended for dusting as the feathers tend to get caught in cracks and crevices and can cause detachment of fragile veneers and gilding. A clean cloth slightly dampened in water may help to remove more stubborn dirt. When dusting, be cautious in areas with loose elements such as veneers, moldings, and metal mounts. Should an element become detached, place it in a plastic bag labeled with its original location on the piece until a conservator can reattach it.

If brass hardware on furniture is tarnishing, the owner may want to polish it. In most cases furniture hardware was intended to be brightly polished. There are many brass polishes on the market. Those that contain ammonia can cause long-term corrosion problems, so it is best to choose one of the polishes that has a mild abrasive embedded in cotton wadding. Ideally, hardware should be removed for cleaning so that the polish cannot come into contact with the surrounding wood. If that is not possible or practical, polish the hardware carefully, confining it to the metal only. A good option to a regular regimen of hardware polishing is to have the hardware coated with clear lacquer.

Before moving a piece of furniture, examine it for loose or damaged joinery. If it is safe to move, remove elements such as shelves, doors, and drawers. If doors cannot be removed, secure them by locking or wrapping the case with soft cotton straps. Tables should always be lifted by the apron or legs rather than by the top, which could possibly detach. Chairs should be lifted by the seat rails and not by the arms or crest rail. When moving a large piece, be sure to lift it and not drag it across the floor, as excessive lateral pressure on legs and feet can cause them to shear off. When transporting furniture in a vehicle, place the object on its back or top, not on the legs. If the piece has a marble top, carefully lift it off and transport or store it vertically, as one would a sheet of glass.

COMMON CONCERNS

Stripping and refinishing furniture is no longer standard practice. An early finish is as important to historic furniture as the legs or any other element. The finish coating offers important data to researchers and is part of the history of the object and once it is removed, it cannot be recovered. It is also desirable to be able to observe on a piece of furniture patterns of wear that indicate the history of use, which stripping and refinishing can obliterate. The appearance of old finishes can often be enhanced without completely removing them by using cleaning materials tailored for specific conditions. The removal and replacement of a surface finish is considered a last ditch effort after other conservation methods have failed. An aged finish, with a patina that only time can produce, can greatly add to the beauty of an object. The primary goal of any treatment should be to maintain the patina of age.

WHEN TO CONSULT A CONSERVATOR

The majority of historic furniture is in private hands. Proper care and maintenance is the only way to ensure its preservation for future generations to appreciate. Although some objects may eventually become part of a museum collection, it is nevertheless incumbent on the current owner to provide proper care. Many aspects of furniture care are straightforward and can be carried out by an educated owner. Problems that are beyond an owner's capabilities should be referred to a conservator. AIC's Guide to Conservation Services at www.aic-faic.org can direct you to a qualified conservator in your area.

ABOUT AIC

The American Institute for Conservation of Historic and Artistic Works (AIC) exists to support the conservation professionals who preserve our cultural heritage. The AIC plays a crucial role in establishing and upholding professional standards, promoting research and publications, providing educational opportunities, and fostering the exchange of knowledge among conservators, allied professionals, and the public. The AIC's 3,500 members all share the same goal: to preserve the material evidence of our past so we can learn from it today and appreciate it in the future.

To learn more about AIC or to become a member, please visit www.aic-faic.org.

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