on GUARD!

Protecting Collections from DETERIORATION

Samuel P. Harn Museum of Art
Why do we protect art?

Museum objects are fragile pieces of history that are meant to inspire, enrich and educate people for generations. When an object becomes part of a museum’s collection, the museum makes a long-term commitment to care for it so that it may be enjoyed by generations to come. The museum must strike a balance between providing public access to objects by exhibiting them, and keeping objects safe from potential harm caused by temperature and humidity variations, human touch, light levels, pests and air pollutants. Museum personnel take their roles as stewards of cultural history very seriously. They go to great lengths to safeguard collections to ensure that they are displayed in pristine condition for as long as they can be maintained. This is why the museum displays many objects in protective Plexiglas cases and why “Please do not touch” signs are posted, reminding visitors of the fragile nature of museum collections.
Proper and stable environmental controls are essential for the care of art objects because an improper, changeable climate can cause objects to mold, mildew, tarnish or crack. Poor climate also can be an invitation for certain types of pests. The preferred temperature for most works of art is 65 to 75 degrees Fahrenheit, and the average humidity should be 45 to 55 percent RH (relative humidity). Ideally, objects should be stored in a stable environment with little or no variations in temperature and humidity, even as the seasons change. The museum uses specialized equipment to continuously monitor temperature and relative humidity levels in storage and exhibition areas.

**home tip:**
Collections in the home are best stored in places that are cool and dry with a stable climate and good air circulation.

**Why is it so COLD in here?**
Why are there signs in museums asking visitors not to touch the objects?

Oils from your hands and small particles of dust in the oils can cause permanent damage to many types of objects. Although they may not be noticed immediately, marks from fingerprints can be difficult to remove and can even cause irreversible damage over time. Museum personnel wear gloves to prevent the natural oils on their hands from coming into contact with the objects. Have you ever looked at a silver goblet or teapot and discovered your fingerprints marked in the finish? The moisture and oils on our hands combine with hydrogen sulphide compounds in the air causing the silver to tarnish. This is the dark or black material that appears on the surface. Not all objects are as visibly sensitive to touch as silver, but the dirt, dust and oil from our hands can affect all types of art.

home tip: It is best to wear clean cotton gloves when handling objects that are most vulnerable to damage. Never use harsh or abrasive chemicals to clean your objects to avoid causing long-term damage. For valuable objects, it is always best to rely on the expertise of a professional conservator.
All light, particularly ultraviolet light, can be harmful to museum objects.

Improper light levels can discolor works such as textiles, botanicals, pigmented objects, works on paper and other organic materials. It also can cause paper to become brittle. Bright light levels over time can damage some types of art. This is why the museum asks visitors not to use a flash when taking photographs. The museum constantly monitors and maintains optimum light levels using a light meter that reads both visible and UV light. In addition, the museum limits the amount of time that light-sensitive works can be on display. Extremely sensitive works are rotated out of exhibitions and may be on display for as little as one year out of five. The museum also controls light by using UV-protective glazing on framed drawings and paintings and by covering windows with blinds or screens and UV-protective film.

**home tip:** To protect sensitive objects, such as works on paper, objects painted with natural pigments, photographs and textiles in your home, avoid placing them near windows.

Two works illustrate the effect light can cause: one unprotected (left), the other protected from exposure (right).

Jamini Roy, *Two Musicians* (left), *Cats Plus* (right), c. 1945, ink on paper, Harn Museum of Art Collection, gift of Mr. and Mrs. Thomas J. Needham.
An important part of proper object care is to regularly examine storage and gallery spaces for evidence of pests. All objects, particularly those made of materials such as wood, fabric and paper, are vulnerable to a variety of insects and other pests. Pests may attack adhesives, binding materials and other substances. The tight, dark spaces found in collection areas are often a magnet for pests. Because some objects are not moved or handled on a regular basis, evidence of pests could go unnoticed without regular checks. A regular pest management program ensures that the museum quickly discovers pests and insects that can be extremely destructive to museum objects. Other pest-preventive techniques include maintaining clean storage spaces, inspecting new objects brought into the museum, not allowing food into collection spaces, using insect traps, and ensuring proper environmental conditions. If evidence of pests is discovered in the museum or on objects, the museum immediately takes corrective action.

**home tip:**
To deter pests from invading art objects in the home, keep the storage area clean and away from food. It also is a good safeguard to keep objects in a cool, dry environment with good air circulation.
Air pollution, including tiny particles of dust, fibers, skin, salt, molds and other microorganisms carried in the air, contains contaminants that may degrade and damage objects. Pollutants that can damage objects include cigarette smoke, cleaners, paints and preservatives. Tiny particles, such as dust, can enter the museum through open doors and windows and on peoples’ clothing, shoes and bodies. These particulates can harm objects by scratching them. Many gases are dangerous to objects because they produce a chemical reaction that can cause materials to break down over time. This is known as off-gassing. To protect objects, the museum regulates its environment using air filtration in the climate-control system. It also stores objects in acid-free boxes, tissues and papers, and keeps them away from certain cleaning products, varnish, paints and adhesives, both while in storage and when on display.

**home tip:** To reduce air-pollution damage to objects in the home, keep objects away from chemicals and cigarette smoke, and store them in acid-free materials in a climate-controlled space. Cover valuable works of art when having your carpets cleaned; the chemicals in the cleaner may discolor many objects.

Images courtesy of Rustin Levenson
Art Conservation Associates
Most people have objects in their lives that they want to preserve because the objects have special meaning—collectibles, family heirlooms, or mementos of people, places or things that are important to them. What many people don’t realize is that everyday activities may have harmful effects on these precious objects. Simply brushing your hand across a painting or taking a photograph of it with a flash, hanging a framed print next to a bright window, or storing photos in an acidic cardboard box in the attic can have devastating effects on the items you love.

When taking care of works of art, prevention is the key to making them last for future generations. It is less expensive to store objects properly today than it is to repair them in the future. Take a tip from the museum, and keep your home interior temperature stable, monitor regularly for pests, and store your mementos in pH-neutral tissues and boxes. There is little we can do to truly make objects last forever, but simple preventive measures will help them last for generations to come.