NEBRASKA TRAILBLAZER
NSHS

No. 31 Conservation and Preservation

Conservation is the name of the work that conservators do to preserve special things, like documents and paintings that are rare, old, or valuable, so that they will survive into the future. These objects are made from many different materials such as wood, metal, paper, or cloth. Conservators study science, art, and history to understand special objects and they work in places like museums, art galleries, libraries, private laboratories, and conservation centers.

Conservators do many different things when conserving objects. They examine things, research them, document them, and treat (or fix) them. Conservators must take great care in deciding how to treat items because they don't want to cause more damage to them. Everything conservators do to objects is reversible. This means the conservators' work can be undone if better ways of fixing things are found. After objects have been conserved they must be stored or displayed safely so they will not get damaged further. Conservators advise on storage and display.

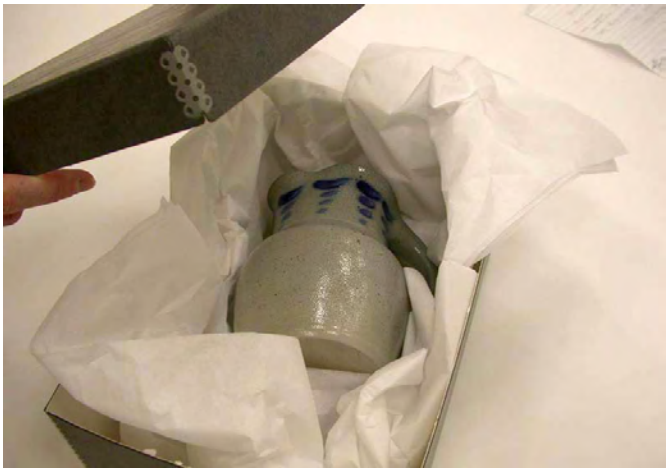
When we go to a museum, the objects in the exhibits show us how people lived and worked in the past. Learning about the past helps us understand what's going on today. Conservation helps objects last longer so we can learn from them, and so others can learn from them in the future.

CONSERVE

When you conserve an object, you stabilize the chemical and physical make-up so that it can survive as long as possible in its original state, it can look better, and it can be safely displayed and stored. Conservation includes preservation, stabilization, and restoration.

Preserve

When you preserve an object you take steps to slow down or prevent deterioration to save it for the future, like giving it safe storage and display.



This ceramic vase is being put into safe storage in a sturdy box with acid-free tissue for padding.

Over the years the varnish on the surface of this painting has darkened until the image is lost. Some of the paint is missing. Cleaning will remove the old varnish. Restoration will replace the missing paint and add a new varnish layer.

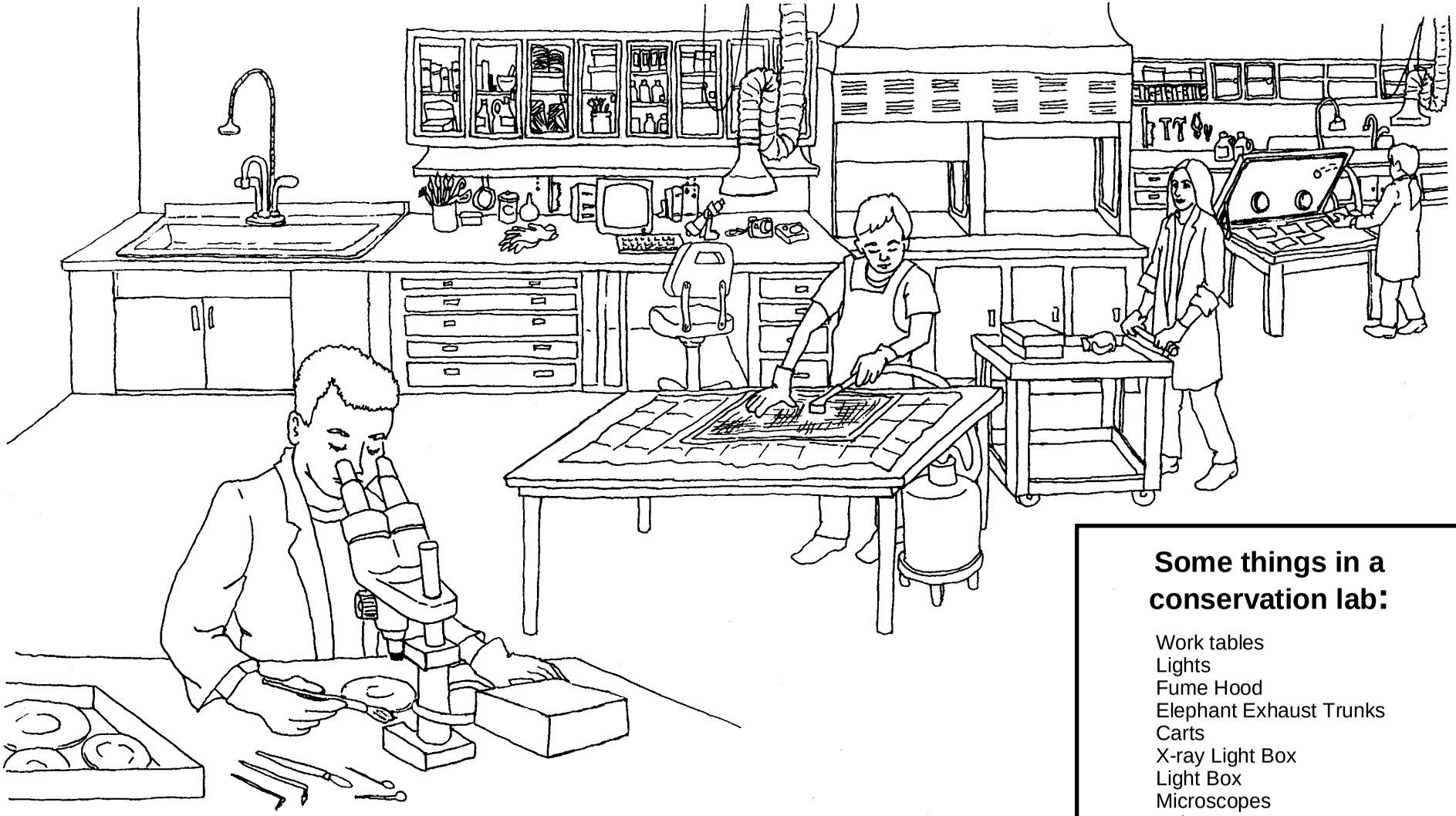
Restore

When you restore an object you are trying to make it look new. Restoration may not preserve or conserve the original materials. Restoration usually requires adding materials not on the object when it was made, like new paint or a new finish.

Stabilize

When you stabilize an object, you perform steps to quickly stop or slow deterioration to keep more damage from occurring. Repairing a tear in a paper is an example.

Cellophane tape can repair a tear in paper, but it does more damage than good. The cellophane on this old tape has loosened and fallen off, leaving behind dried out adhesive and stains on the pages of these books. Conservators use Japanese tissue paper and wheat starch paste to make such repairs.



The Conservation Lab

In the lab, a conservator uses a stereomicroscope to examine and clean an object. Behind him, a technician uses a cleaning screen and low vacuum suction to clean a quilt or coverlet. In the background are oversized sinks, fume hoods, and a conservator placing documents into a hydrating chamber.

Some things in a conservation lab:

Work tables
Lights
Fume Hood
Elephant Exhaust Trunks
Carts
X-ray Light Box
Light Box
Microscopes
Paints
Easel
Brushes
Hand Tools
Torch
Lab Coats and Safety Gear
Objects
Conservators
Photographic Equipment
Chemicals
Solvents
Resins
Conservation Reports
Object Documentation

PREVENTATIVE CONSERVATION

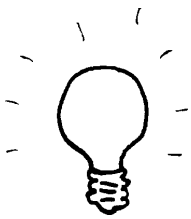
Preventive Conservation is a term used to describe the simple everyday things you can do to help conserve objects.

Careful Handling

Dirt and oils on hands can make objects dirty. Touching or holding objects carelessly can tear or break them.

This conservator uses a handcart to move objects from one area to another. Latex or cotton gloves protect the objects from dirt and oils that may be on hands.

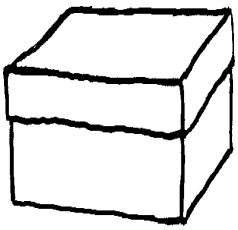
Photographs and their negatives are especially sensitive to the dirt and oils that may be on hands. Cotton gloves are helpful in preventing fingerprints and stains. Negatives should be handled only by their edges.



Keep Light Away

Light produces energy that can fade objects and make them brittle. Objects should be kept out of direct sunlight and away from lights in your house.

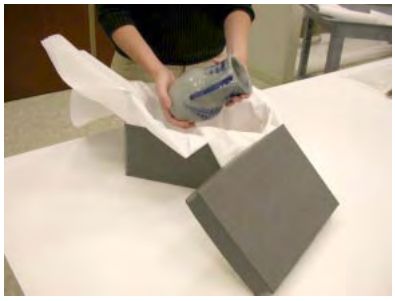
This red cotton dress is on display at the Nebraska State Historical Society's Museum of Nebraska History in Lincoln as an example of fading due to light. Early display methods allowed half of the dress to be in bright light. Even the beads show fading in color!

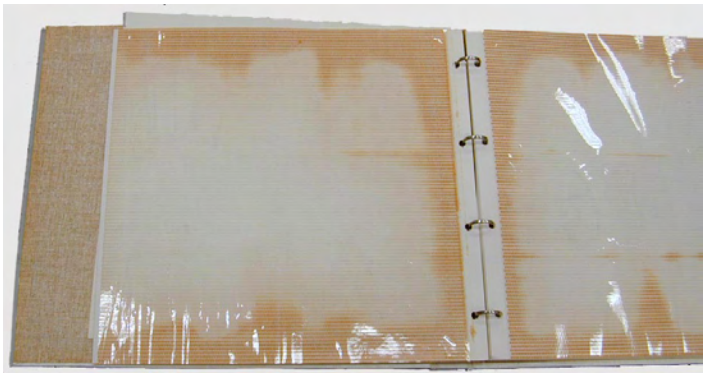


Safe Storage

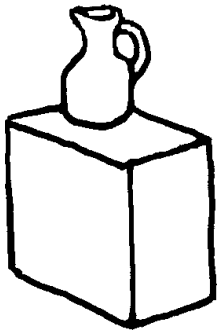
Objects need to be stored so light, temperature, relative humidity, handling or pests won't harm them. Special storage containers can be bought or made so objects will not become damaged. Attics and basements are not good places to keep special things.

A sturdy box and lots of padding will help keep a breakable object safe in storage.





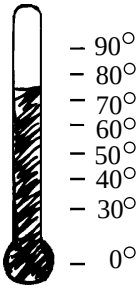
Regular cardboard is not good for long term storage. The acid in the cardboard file divider on the left has stained the file folder next to it. The magnetic photo album above shows acid damage from the cardboard under the plastic page covers. The plastic covers will also damage photos over time. The sticky stripes that hold the photos and covers in place can become permanently stuck to them.

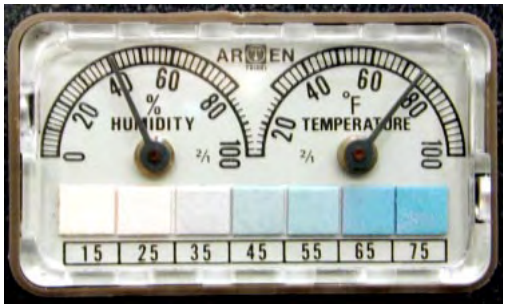


Safe Display

Objects need to be displayed so light, temperature, relative humidity handling or pests won't harm them. In museums, objects are displayed in cases designed to keep them safe from these threats.

This engraving has been stored in a frame. It did not have an acid-free mat, and the print is stained. Such damage is called a "mat burn."





Safe, Steady Temperatures

Too much heat can make an object fall apart faster. Freezing an object can cause stress to the structure of an item. Temperatures that go up and down can make the object crack and fall apart more easily.

An unheated or uncooled garage, attic, or basement may cause damage to objects stored there. Using acidic cardboard boxes and stacking them can add to the damage.

Safe, Steady Relative Humidity

Relative humidity is a measure of the amount of moisture in the air. Low relative humidity makes an object dry and brittle. High relative humidity can allow mold to grow, which can weaken and stain materials. Relative humidity that goes up and down weakens the object by making it swell and shrink.

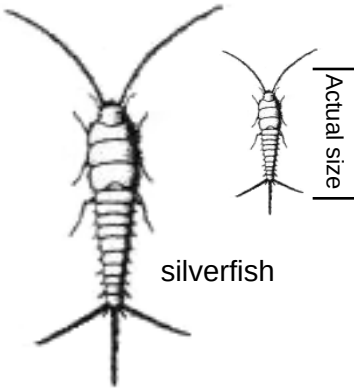
Moisture has caused the metal fasteners on this trunk to corrode and rust, staining the wood.

Mold damages and eventually destroys objects. It can also be a health hazard for those with allergies.

Get Rid of Pests

Insects and rodents will eat and/or make nests in organic objects, which are made from plant or animal products.

A moth lays its eggs on the fabric. The larva or caterpillar stage of the moth does damage when it feeds.



silverfish

This photograph has been damaged by silverfish.

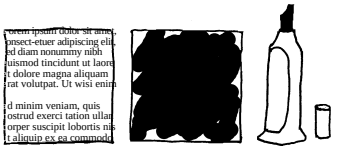
A silverfish is a slender, wingless insect with shiny silver or gray scales. It eats starch, any paper on which there is glue or paste, sizing in paper, bookbindings, and photos.

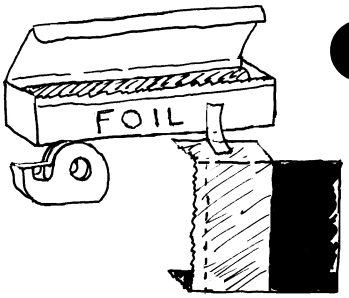
Everyone can help conserve things – old objects should be protected because they are fragile. Newer ones should be protected because they may have special value in the future. You might even have a special museum object of the future in your school desk right now!

Doing Your Own Light Fading Experiment

You will need: a square piece of newspaper, 5 square pieces of white paper (copy paper is fine), a magic marker, a highlighter, a pencil, a crayon, another art media of your choice, aluminum foil, scissors, tape, a large piece of cardboard, thumbtacks, and a sunny, protected place.

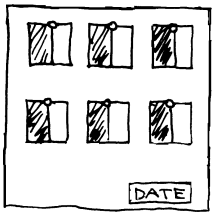
1 Cover the entire surface of each of the white squares with one of the media (magic marker, etc.).





2 Cover half of each paper square, including the square of newspaper, with a rectangle of aluminum foil. You may have to tape the aluminum foil to the back of the paper.

3 Attach the paper squares to the large piece of cardboard with the thumbtacks. Write the date on the cardboard.



4 Place the cardboard in a sunny but protected outdoor place, such as a porch. The board should be protected from wind and rain but should be in full sunlight.

5 After a few weeks, remove the aluminum foil rectangles and see if your samples have faded. Should you use highlighters on important history or art projects? Are pencil marks stable when exposed to light? Should you leave any important objects in sunlight?

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