

The sooner a broken item is taken to a conservator, the better. Ceramic and glass will not normally deteriorate whilst awaiting repair, but edges are likely to get dirty and the pieces more vulnerable to further damage if you leave them to one side and forget.

## REPAIR AND RESTORATION

It is worthwhile and cost-effective to have valuable (sentimental or monetary) items repaired and restored by a conservator. If you try to repair objects yourself, you may cause more damage to the piece. It is common for owners and amateur restorers to use too much adhesive which then spreads over the surface and becomes hard to remove; also for pieces to slip out of alignment due to inadequate support during the adhesive's setting time. Subsequent removal of previous repairs by a conservator is time-consuming and adds to the cost of the professional repair.

A ceramics and glass conservator will have knowledge of technology, historical styles and the chemistry of materials used to make and mend these items. They will only use materials and techniques which are proven not to damage the artefact.

## CONSULTING A CONSERVATOR

- The owner or custodian can undertake the above measures to clean and protect ceramic and glass; however there are instances when a conservator can provide invaluable help.
- A conservator can assess the condition of individual items or a collection.
- A conservator can carry out safe treatment to repair an item, consolidate decoration or (in the case of archaeological items) stabilise a salt problem.
- Your conservator can also advise on the best method of display, and help with packing for safe removal and transportation.
- Expect a conservator to give you options about how your piece will look if you are asking them to make a repair. 'Invisible' repairs are possible for some types of fabric, but not always achievable or appropriate with others. In a museum or gallery context, for example, an 'honest' repair with minimal disguise may be more fitting and allow viewers to appreciate an item's history.

## Find a conservator by using the Conservation Register.

The Register is free to use; it provides detailed information on conservation-restoration businesses based in the UK and Ireland including contact details, referenced examples of previous work and the qualifications of members of staff. It is searchable by specialist skill and geographical location and each business has been required to meet rigorous criteria which include professional accreditation; the information is regularly updated.

[www.conservationregister.com](http://www.conservationregister.com)

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This article offers general guidance and is not intended to be a substitute for the professional advice of an accredited conservator. The views expressed are those of the author or authors, and do not necessarily represent the views of the Institute of Conservation. The Institute of Conservation would like to acknowledge use of the MGC publication 'Ours for Keeps' and the UKIC Ceramics and Glass Conservation Group leaflet 'Caring for Ceramics & Glass' by S Davison and A Barnes in the preparation of this text. The Institute of Conservation and its partners accept no liability for any loss or damage which may arise if this guidance is followed.

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# Care and conservation of ceramic and glass



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## CERAMIC

Ceramic is a broad term covering all types of fired clay, including terracotta, earthenware, stoneware and porcelain. Ceramics can be roughly divided into four categories as identified below:

- Low-fired pottery or earthenware (soft, porous): Neolithic, Greek, Roman and Chinese; tin-glazed Islamic and Hispano-Moresque, Italian maiolica, French faience, Dutch delft and English delftwares; lead-glazed Islamic; slipwares, Staffordshire.
- High-fired pottery or stonewares (non-porous): Chinese Yueh ware and celadons; (salt glazed) Rhenish and English stonewares; (lead glazed) Staffordshire stonewares and cream wares; Wedgwood basalt and jasper wares (unglazed).
- Soft paste 'imitation' porcelain: Medici, Capodimonte, Rouen, St. Cloud, Mennency, Vincennes, Bow, Chelsea, Derby, Worcester; bone china; unglazed Parian wares.
- Hard paste 'true' porcelain: Chinese and Japanese porcelains, Meissen, Vienna, Sevres, Plymouth, Bristol; biscuit wares (unglazed).

Low-fired pottery and soft-paste porcelain tend to be more fragile and porous whereas high-fired stoneware and hard-paste porcelain are generally more durable and non-porous. All are made of various types of clay with or without additives; some may be painted, glazed and enamelled or gilded. Ceramic objects include utilitarian and decorative vessels, and sculpture and dolls.

## GLASS

Glass is another broad term, covering a number of materials (glass, glazes, enamel and Egyptian faience) made from silica (sand), alkali (soda or potash), and calcium (lime). Glass may be clear and colourless, or may be coloured by the addition of metallic oxides. Lead glass, produced by the addition of lead oxide to produce a 'soft' sparkling glass which is easily cut, is often referred to as 'crystal'. Glass can be decorated in the molten or hard state; the effects are many. Glass objects include utilitarian and decorative vessels, sculpture, enamel boxes, chandeliers, mirrors, and reverse paintings on glass.

## TYPES OF DAMAGE

Compared with other materials such as textiles and metals, ceramic and glass are generally stable and are not readily subject to variations in the environment. However, being brittle, they are easily broken. The most usual damage is breakage caused by the objects being washed, transported in inadequate packing, dropped, or by being knocked off shelves during dusting, or by children, pets or curtains. Fortunately, there is much that individual owners can do to prevent such damage from occurring.

## DISPLAY

Display cabinets offer the best protection for ceramic and glass objects. Objects on open display should not be propped up against one another or shelves overcrowded. Plate stands must be substantial enough to counterbalance the weight of the plate and plate hangers should be of the plastic-covered wire variety. If your object has been previously mended, a plate hanger may put too much pressure on the repairs so should not be used.

**Ask a conservator's advice on displaying valuable objects, especially those that show signs of previous repair.**

If possible, display cabinets should be placed away from areas of heavy foot traffic such as hallways to minimise vibrations, and away from areas of fluctuating temperature (e.g. radiators).

## HANDLING

Try to keep handling to a minimum. Before moving objects, remove any loose clothing or jewellery which may snag on objects and ensure that your hands are clean as porous ceramics absorb grease and dirt. Ceramic and glass objects should be handled with care, using both hands and being careful to set objects down gently. Lids should be removed before handling teapots and objects should not be lifted by knobs, arms, handles or their rims which are areas of potential weakness. If objects are being moved, for example to another room, it is advisable to pack them in tissue in a box or basket before transporting them. Always make sure you have a clear and safe space to take the item to, before you move it.

## CLEANING

First, inspect for old repairs and restorations: many were carried out with water-soluble materials and may be difficult to detect, especially if the object is dirty. Rivets are obvious and, although unsightly, are part of the object's history, so might be retained if sound. Overpaint is another sign of previous repair; it may have discoloured and usually covers an area larger than the damage. Repaired or restored ceramics and glass should not be washed, merely dusted or occasionally wiped over with a damp cloth.

**Consult a conservator if you find any of these features; they can advise you on cleaning, or do this for you.**

Ceramic and glass objects can be dusted using a soft sable brush, holding the object with one hand. Dry cotton wool or cloths will catch on rough surfaces, leaving filaments of fibres behind, and possibly causing damage.

Higher-fired wares such as stoneware or porcelain may be washed in water, but only after careful inspection of their condition and stability. Use a plastic bowl (or pad the sink and taps), and make sure that only one object is in the bowl or sink at a time. Use tepid water with a few drops of mild detergent and rinse well with clean water, leaving to dry naturally on a well-padded draining area. Take care to ensure that undue pressure is not placed on rims or stems, and that the object is not at risk of over-balancing.

Do not use water to clean partially glazed earthenware, objects with deteriorating or flaking glaze, damaged pieces with chips, cracks, breaks or old restoration, objects with metal mounts, unfired painted and gilded decoration.

**Consult a conservator if you are in any doubt whether to wash an object.**

Valuable items should never be placed in a dishwasher - this may damage glass and glazes irreversibly.

## WHAT TO DO WHEN SOMETHING IS BROKEN

Wrap each piece separately in white, acid-free tissue paper, and place them in a clearly labelled box. Collect even the tiniest chips, which may have scattered widely, beneath carpets or furniture. Do not try to fit the pieces together as more damage can be done by grating the edges together; do not tape fragments together or onto paper as tape is difficult to remove and may damage gilding or fragile surfaces.