1. **Physical forces**  
   (shock, vibration, abrasion and gravity)  

   Cumulative (improper handling or support)/  
   Catastrophic (eg earthquake, war, floor collapse, improper handling):  
   - break, distort, puncture, dent, scratch, and/or abrade all types of artefacts.

2. **Thieves and vandals**  

   Intentional (criminals):  
   - steal small or portable artefacts.  
   - disfigure valuable, popular or symbolic artefacts.  

   Unintentional (staff, users):  
   - lose or misplace any artefact.

3. **Fire**  

   - destroys, scorches or deposits smoke on all types of artefacts, particularly those that contain organic materials.

4. **Water**  

   - causes efflorescence or tide marks in porous materials.  
   - swells organic materials.  
   - corrodes metals.  
   - dissolves some materials (eg glues).  
   - delaminates, tents, and/or buckles layered components of an artefact.

5. **Biological – pests, mould and microbes**  

   **Insects:**  
   - consume, perforate, cut, graze, tunnel, and/or excrete, which destroys, weakens, disfigures, or etches materials, especially furs, feathers, skins, insect collections, textiles, paper, and wood.

   **Vermin, birds and other animals:**  
   - gnaw organic materials and displace smaller items.  
   - foul artefacts with faeces and urine.  
   - gnaw through or foul inorganic materials if they present an obstacle to reaching the organic material.

   **Mould and microbes (see also incorrect RH, Damp):**  
   - weaken or stain organic and inorganic materials.
6. **Chemical - pollutants and contaminants**

Indoor and outdoor gases (eg air pollution)/
Liquids (eg plasticisers, grease) / Solids (eg dust, salt):
- disintegrate, discolor, or corrode all artefacts, especially reactive or porous materials.

7. **Radiation**

Ultraviolet / Visible light:
- disintegrates, fades, darkens, and/or yellows the outer layer of organic materials and some coloured inorganic materials.

8. **Incorrect relative humidity (RH)**

**Damp (over 65%)**:  
- causes mould (which stain and weaken organic and inorganic materials), corrosion (of metals), and shrinkage (of tightly woven textiles).

**Dry (under 50%)**:  
- causes shrinkage of moisture containing materials resulting in breakage, and desiccation (of glues).

**Fluctuations**:  
- shrink and swell unconstrained organic materials.  
- crush or fracture constrained organic materials.  
- cause layered organic materials to delaminate, tent, and/or buckle.  
- loosen joints in organic components (eg furniture).

9. **Incorrect temperature (T)**

**Too high**:  
- causes gradual disintegration or discoloration of organic materials, especially if they are chemically unstable (eg acidic paper, colour photographs, nitrate and acetate films).  
**Too low**:  
- causes embrittlement, which results in fractures of paints and other polymers.  

**Fluctuations**:
- cause fractures and delaminations in brittle, solid materials, especially if they are layered.  
- cause RH fluctuations (see "Incorrect Relative Humidity").

10. **Disassociation**

From: Canadian Heritage and Canadian Conservation Institute  
"Framework for Preservation of Museum Collections".