Mineral Hardness and Cleavage



Hardness is tested by rubbing one mineral against another to see if it scratches. This is done with Moh's hardness set of minerals (left).

Most of the time, however, hardnesses relative to a fingernail, or a knife blade/glass is enough. The knife/glass test is quite important, but requires care since many important minerals are just slightly harder than glass. These minerals may scratch glass only on a sharp point, or only with difficulty, especially if weathered to any degree. A better test is to run a knife blade, or some similar sharpened piece of steel, across a cleavage face. If it slips smoothly and shows no tendency to bite in, the mineral is harder than glass.



fluorite)



(6 cleavages, 12 faces; e.g. sphalerite)



angles; e.g. calcite, dolomite)



(2 cleavages, 4 faces of many possible angles; third side fractures irregularly; e.g. pyroxene, amphibole, feldspar)



(1 cleavage, 2 faces; e.g. biotite, muscovite, chlorite)