

# What this sculpture represents

A tetrahedron is formed by the close packing of four spheres, and consequently it is a common structural feature in many materials. The notion of “frustration” arises from the geometric observation that tetrahedra cannot be packed together in such a way that they fill space. One can see in this figure what happens if one tries to place 5 tetrahedra next to each other such that they share a common edge - there is a small ( $5^\circ$ ) gap left when one makes this construction. Clearly, a sixth tetrahedron cannot fit in this gap. The geometry of space frustrates the packing of tetrahedra.

