

Silicate minerals

Silica tetrahedral models

D

To show relative position use normal chemistry molecular models. To show relative size 4 ping pong or golf balls (representing the oxygen atoms) and a steel ball or sphere of fimo a fifth of the diameter (representing the silicon). This could also be made from suitable polystyrene balls.



Magnetic model

D

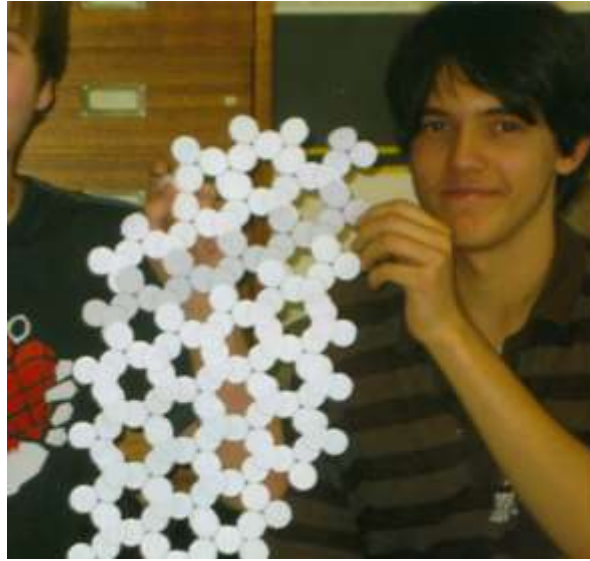
Use triangular pieces of card with circles stuck on to represent the tetrahedra. These can be used on a magnetic board and shown as isolate structure or joined to form chains or sheets.



Making chains and sheets

A P F 10 min

Students are provided with paper tetrahedra which they join up using glue to make chains. They are also provided with paper chains of tetrahedra which they join up to make double chains and sheets.



Chocolate tetrahedra

A I 5 min

Students make tetrahedra from Maltesas and use a silver cake decoration ball for the silicon. The Maltesas are slightly melted by heating very briefly with a match or tea light candle to glue them together. It is not sensible to make chains this way. They can only eat the Maltesas after the tetrahedras have been made. To hold the Maltesas together you will need a piece of wood with a hole 32mm diameter and 5mm deep or a suitable bottle top.

