



Hidden Shapes

Equipment:

5 large trays approx. 60cm x 60cm
Lego or other way of making shapes
Blu-tak
10 marbles
Stiff card size A4
Blank paper or a worksheet
Pencils

Optional equipment for starter demo:

Muffin tray
Balls of different sizes, eg a football and a tennis ball

Set up:

Build 5 different shapes from Lego. They should be three regular pieces tall.
Geometric shapes, or letters such as H, T, O work well.
Use blu-tak to fix them to the centre of each tray, and then cover them with the card, also held down with Blu-tak, ensuring the shapes cannot be seen.
Put a blank piece of paper on top of each piece of card

Introduction:

Scattering is an important part of understanding what is at the centre of an atom.
Rutherford Scattering was used to determine the structure of the atom with a single positively charged nucleus and then largely empty space.

It is also the same principle used for many experiments that will happen at ESS, where

