Metals and their Compounds
Lecture 2.4

Unit cell is arbitary, but is usually chosen to be the *smallest* part of patern which describes the *whole* pattern. It is made up by joining any set of *equivalent* points (*lattice* points).

In crystals, the lattice points are normally chosen to be the centers of *atoms*. The unit cells are used to describe *lattices* (see BLB fig 11.31).

Metals and simple ionic compounds e.g. Na^+Cl^- have structures (3-D arrangements) which can be thought of as *close packing of spheres.* (atoms/ions are *modeled* by hard spheres)

Close packing of spheres is the *most efficient* way of packing a collection of identical sized spheres. The structures of metals most closely adhere to this *model*. (see BLB figure 1.36)