

# Periodic Table

## Apparatus

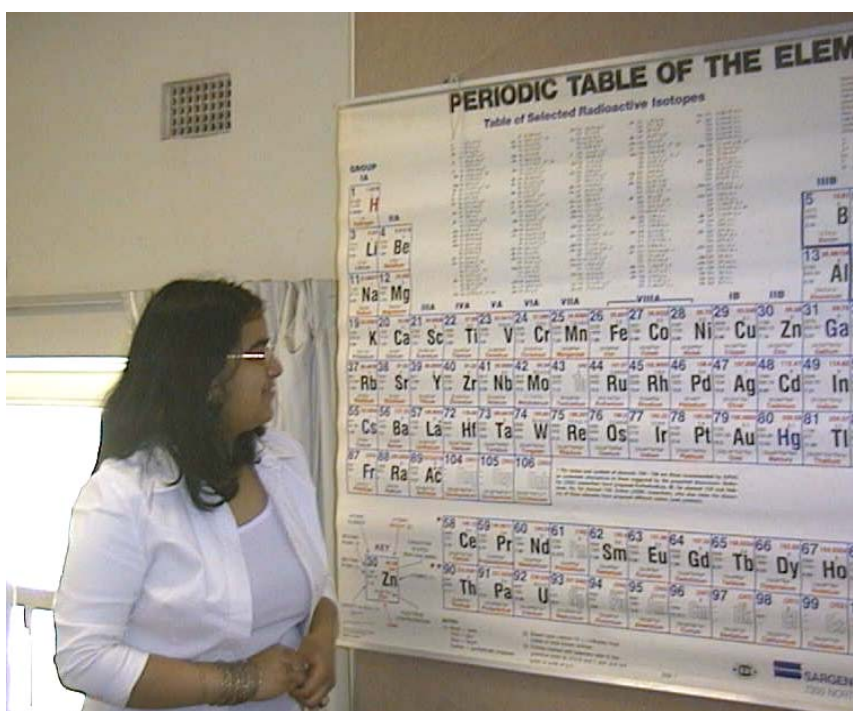
large chart of the periodic table of the elements

## Action

The students look at the table and try to explain the relationship between position and characteristics, such as ionization energy, bonding, etc.

## The Physics

The elements are arranged according to their number of outer shell electrons, which is determined by the quantum numbers, ( $n$ ,  $l$  and  $m$ ) and the Pauli exclusion principle.



A student at the University of Sydney looking at a periodic table.

## Accompanying sheet:

### Periodic Table

Examine the chart of the periodic table.

Why are there only 8 elements in both the second and third period?  
Shouldn't there be more in the third?

Why do elements in a given column have similar characteristics?