

Starter Activity

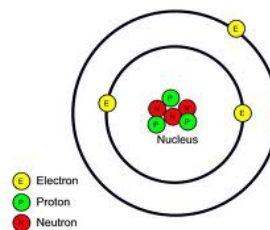
Draw a labelled diagram of an atom.

Atomic Structure

Aim: to calculate the number of protons, neutrons and electrons in an atom.

Starter: peer assess each other's atom diagrams

- labelled nucleus
- labelled protons
- labelled neutrons
- labelled electrons
- same number of protons and electrons



Most stuff is made of atoms. E.g. pens, books, air, water, people.

Some stuff is not made of atoms. E.g. light, a vacuum, things that are smaller than atoms (e.g. electrons).

Subatomic Particles

	Relative mass	Relative charge
proton	≈ 2000	1 or +1
neutron	≈ 2000	0
electron	1 $\approx \frac{1}{2000}$	-1

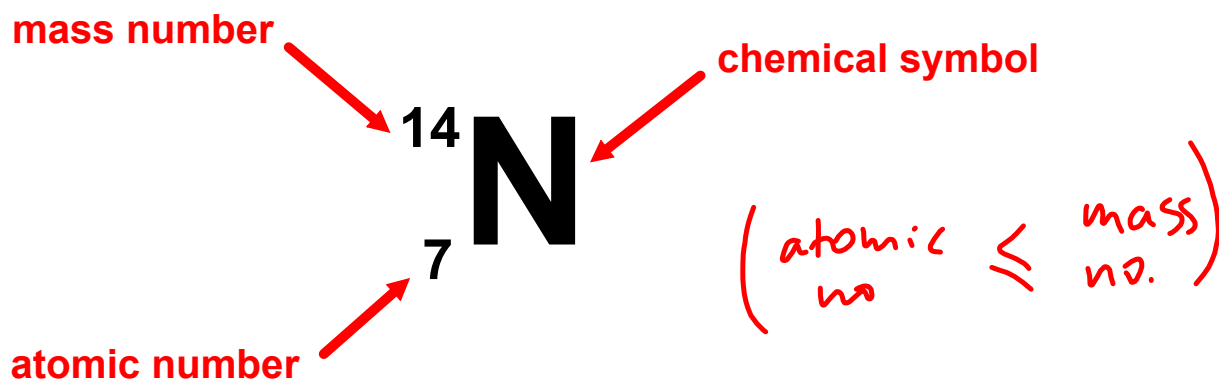
How small is the nucleus?



How many protons, neutrons and electrons are there in an atom?



How many protons, neutrons and electrons are there in an atom?



atomic number = number of protons

mass number = number of protons + number of neutrons

number of neutrons = mass number - atomic number

in a neutral atom, number of electrons = no. of protons

The atomic number (i.e. the number of protons) determines the element.

The number of electrons, neutrons, and the mass number do not determine the element.

