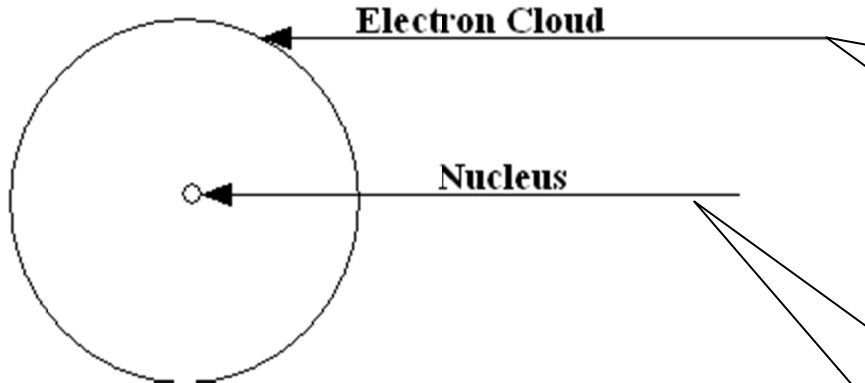


# Atomic Structure



- Contains particles called \_\_\_\_\_
- Makes up most of the v \_\_\_\_\_ of the atom
- \_\_\_\_\_ charged (electrons are negative)
- Electrons are small and essentially have no mass, so the electron cloud is mostly empty space

- Contains particles called \_\_\_\_\_ and \_\_\_\_\_
- \_\_\_\_\_ charged (protons are \_\_\_\_\_ and neutrons are \_\_\_\_\_)
- Small
- Contains virtually all of the \_\_\_\_\_ of the atom
- Being small and having most of the mass of the atom makes the nucleus ***extremely*** \_\_\_\_\_

	Where Found	Charge	Mass Number
Proton			
Neutron			
Electron			

- Definitions**
- ❑ \_\_\_\_\_: the smallest particle of an element that retains the properties of that element
  - ❑ \_\_\_\_\_: the number of protons in the nucleus of an atom
  - ❑ \_\_\_\_\_: the total number of protons and neutrons in the nucleus of an atom
  - ❑ \_\_\_\_\_: Atoms of the same element that differ in mass number (differing numbers of neutrons)

- Basic Electrostatics:**  
Opposite charges attract and identical charges repel
- Electrons and protons \_\_\_\_\_ each other
  - Protons \_\_\_\_\_ other protons
  - Electrons \_\_\_\_\_ other electrons
  - Neutrons are neutral and should neither \_\_\_\_\_ nor \_\_\_\_\_ any particles

- Nuclear Forces:**  
 Powerful short range forces in the nucleus that hold the nuclear particles (protons and neutrons) together. These forces overcome the \_\_\_\_\_ of protons.