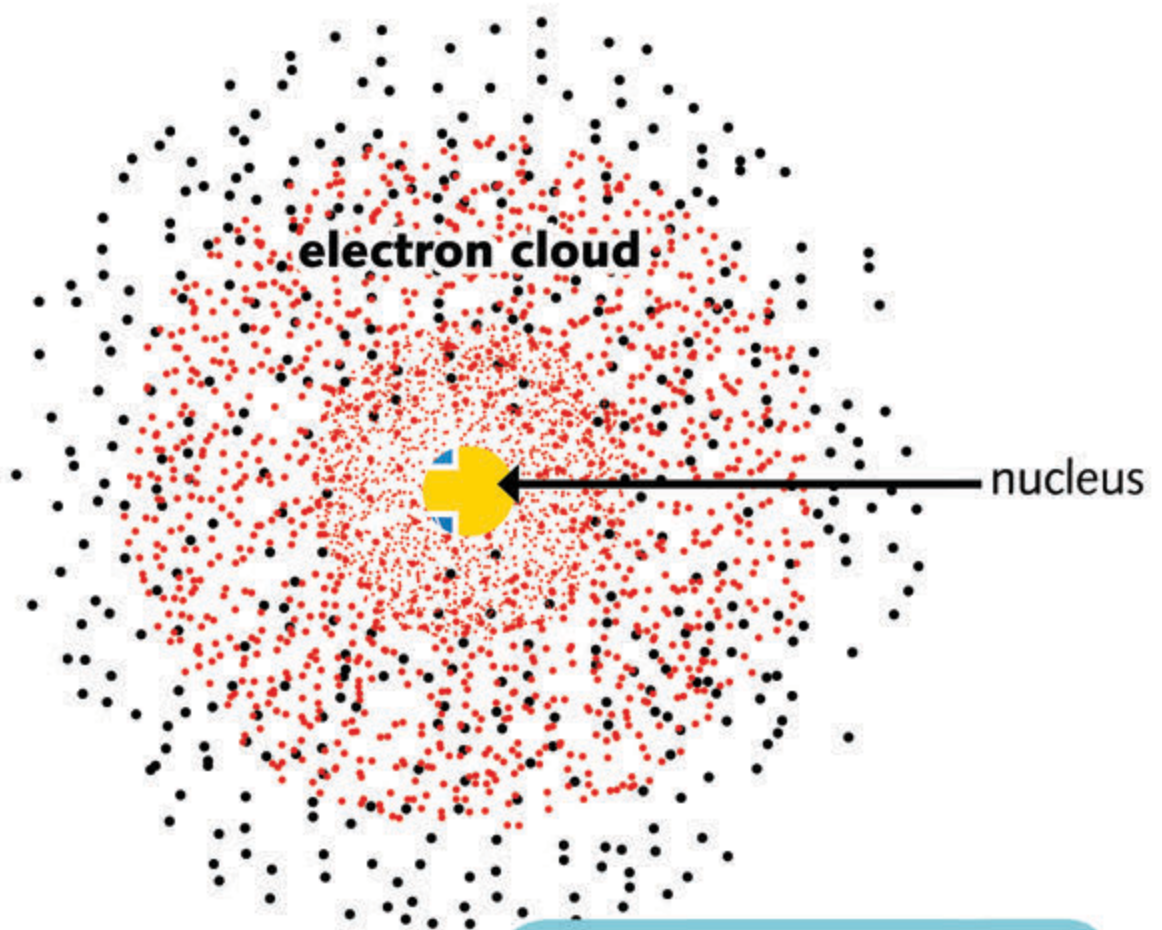


Ernest Rutherford (1871–1937) studied radioactive materials, especially the rays coming from some materials. He discovered that atoms have nuclei and went on to work with others to show how radioactive atoms break down.



An atom's particles move all the time. Electrons and their motion energy keep them from crashing into the nucleus and help hold the atom together.

Electrons don't follow an exact **orbit**. The electrons flow in layers, called shells. They form a cloud around the nucleus.



## Atomic Fact

Millions of atoms could fit in this period.