**Atoms**

In Science class today, Mr. Smith taught us about atoms.

Things I learned:

* Atoms are the smallest unit of an element to retain all the chemical properties of that element.
* Atoms are the smallest piece of matter.
* All matter is made of atoms.
* There are certain specific “orbits” in which and electron can travel around a nucleus without having to radiate any energy.
* Protons are positively charged.
* In models they have little plus signs on them to represent their positive charge.
* Neutrons do not have a charge.
* They are neutral. You can tell this from the “neutr” part of their name.
* Electrons have a negative charge.
* They have little minus signs on them in models to represent their negative charge.
* The first electron orbit around a nucleus can have a maximum of two electrons.
* A baseball is sort of like a neutron, in that it behaves as a particle.
* It follows a well-defined path as it travels from pitcher to catcher.
* Electron paths are not precisely known.
* The best scientists can do is to calculate the probability of the electron(s) following a specific path.
* In a cloud model (see bottom of page), where the electrons are is a guess.
* It is possible to map the probability of the most likely location outside of the nucleus that the electron(s) would be.
* The probability map is called an “orbital.”
* Two other kinds of atom models are called a planetary model (see bottom of page), and a more modern quantum mechanics model (see bottom).





