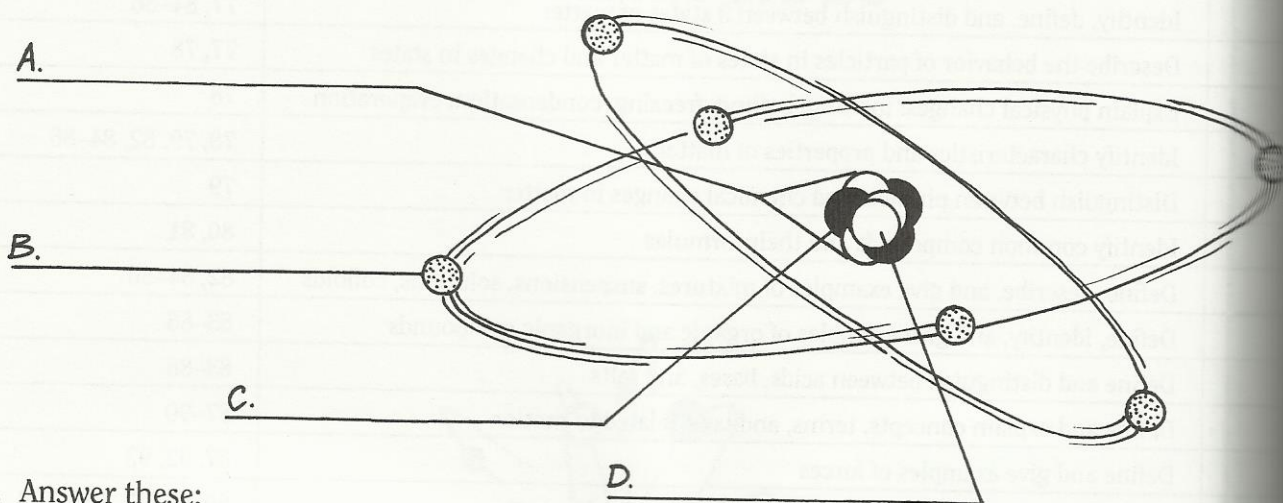


# ON THE INSIDE

A Greek philosopher called Democritus, who lived over 2000 years ago, taught people that all things were made of grains which could not be divided. He called these grains *atoms* because in Greek *atom* means *indivisible*. Today, *atom* is the common name for the tiny particles of matter that cannot be further divided (and still be the same substance). If you could look inside an atom, you'd find that it looks like a miniature solar system, with something in the center and other things orbiting around it.

I. Label the parts of this atom (nucleus, protons, electrons, neutrons).



II. Answer these:

- \_\_\_\_\_ 1. the part of the atom that carries no electric charge
- \_\_\_\_\_ 2. the part of the atom that carries a positive charge
- \_\_\_\_\_ 3. the part of the atom that carries a negative charge
- \_\_\_\_\_ 4. the number of electrons that can be held in the first orbit (closest to the nucleus)
- \_\_\_\_\_ 5. the number of electrons that can be held in the second orbit
- \_\_\_\_\_ 6. the number of electrons that can be held in the third orbit
- \_\_\_\_\_ 7. there are the same **number** of these two particles in an atom
- \_\_\_\_\_ 8. the atomic number **is** the same as the number of these particles

Draw your own model of an atom with **eight** protons, eight neutrons, and eight electrons (an oxygen atom).

Name \_\_\_\_\_