Models of the Atom: Understanding the Main Ideas

Decide which model of the atom each of the following sentences describes. Then fill in the blank before each sentence according to the following key:

DM = Democritus

DL = Dalton

R = Rutherford

T = Thomson

B = Bohr

EC = Electron Cloud

If a sentence seems to describe more than one atomic model, choose the model that *first* pictured the atom this way.

_____ 1. Atoms are small, hard particles.

_____ 2. An atom contains negatively charged particles called "corpuscles."

_____ 3. Atoms of the same element are exactly alike.

_____ 4. In an atom, electrons move in definite orbits around the nucleus, much like planets circle the sun.

_____ 5. An atom is the smallest piece of matter.

_____ 6. An atom is mostly empty space with a dense, positively charged nucleus in the center.

_____ 7. Atoms are indivisible.

_____ 8. An atom has a small, positively charged nucleus surrounded by a large region in which scientists can predict where an electron is likely to be found.

_____ 9. An atom is made of positively charged, puddinglike material through which negatively charged particles are scattered.

_____ 10. In an atom, electrons are located in energy levels that are a certain distance from the nucleus.

Write five facts about the term **nucleus**, using the following words as cues.

1. Size _____

2. Location _____

3. Rutherford _____

4. Charge _____

5. Density _____