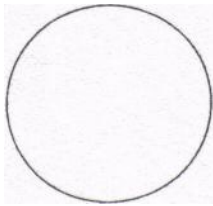
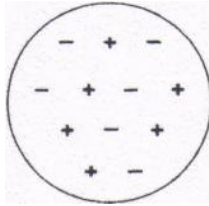


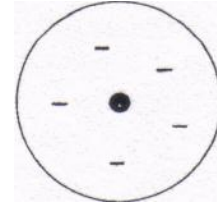
Models of the Atom



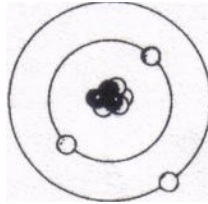
(a) Dalton's model
(1803)



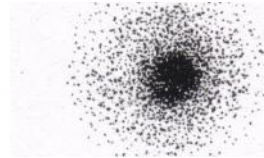
(b) Thomson's plum-pudding
model (1897)



(c) Rutherford's model
(1909)



(d) Bohr's model
(1913)



(e) charge-cloud model
(present)

1. Describe the discovery that led scientists to question John Dalton's model of the atom and to favor Thomson's model.
2. What experimental findings is the basis for the 1909 model of the atom?
3. What shortcomings in the atomic model of Ernest Rutherford led to the development of Niels Bohr's model?
4. A friend tells you that an electron travels around an atom's nucleus in much the same way that a planet revolves around the sun. Is this a good model for the present day view of the atom? Why or why not?
5. Another friend tells you that the present-day view of an electron's location in the atom can be likened to a well-used archery target. The target has many holes close to the bull's-eye and fewer holes farther from the center. The probability that the next arrow will land a certain distance from the center corresponds to the number of holes at that distance. Is this a good model?