Name _____ Class _____ Date _____

Skills Worksheet

Reinforcement

Atomic Timeline

Complete this worksheet after you have finished reading the section "Development of the Atomic Theory."

The table below contains a number of statements connected to major discoveries in the development of atomic theory.

1. In each box, write the name of the scientist(s) associated with the statement. Choose from among the following scientists: Democritus, Rutherford, Thomson, Dalton, Bohr, or Schrödinger and Heisenberg.
2. On a separate sheet of paper, construct a timeline, and label the following: 440 BCE, 1803, 1897, 1909–1911, 1913, and the 20th century. Cut out the boxes and tape or glue each box at the correct point along the timeline.

A. Most of an atom's mass is in the nucleus.	**B.** There is a small, dense, positively charged nucleus.
C. There are small, negatively charged particles inside an atom.	**D.** Electrons can jump from a path in one level to a path in another level.
E. Atoms of different elements are different.	**F.** He conducted the cathode-ray tube experiment.
G. Atoms contain mostly empty space.	**H.** Atoms are "uncuttable."
I. He conducted experiments in combining elements.	**J.** Electrons travel in certain paths, or energy levels.

Reinforcement *continued*

K. Electron paths cannot be predicted.	**L.** His theory of atomic structure led to the plum-pudding model.
M. His model had electrons surrounding the nucleus at a distance.	**N.** Atoms of the same element are exactly alike.
O. Electrons are found in electron clouds, not paths.	**P.** All substances are made of atoms.
Q. He conducted the gold-foil experiment.	**R.** He wanted to know why elements combine in specific proportions.