Name Date Key

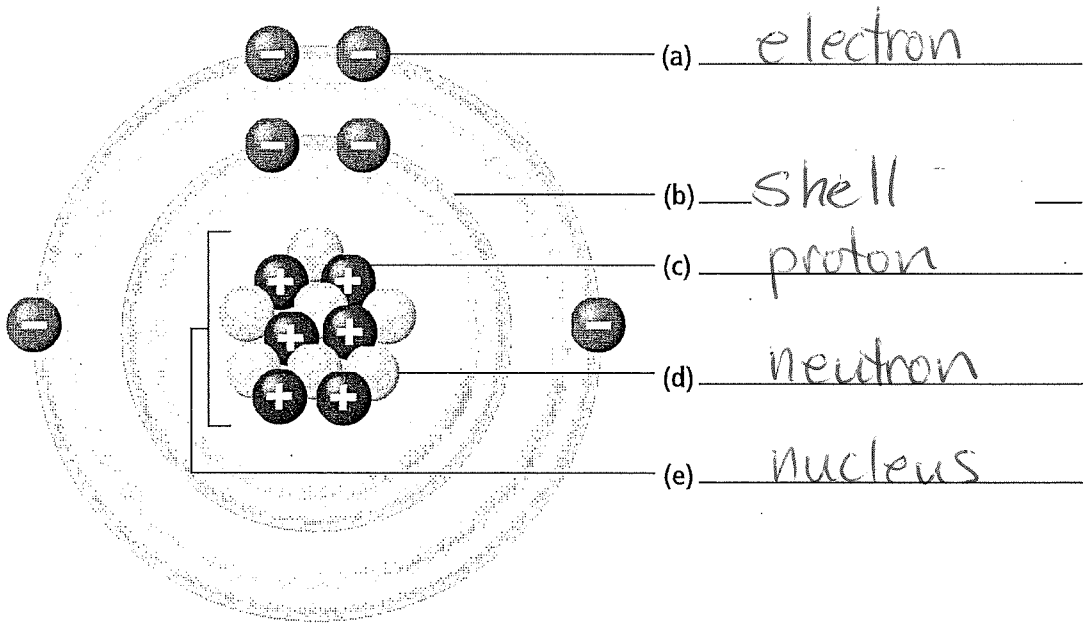
Vocabulary
Section 1.3

Use with textbook pages 28–33.

Atomic structure

1. Use the vocabulary terms that follow to label the parts of an atom. Place the correct term on the line next to each part of the atom. You will not need to use all the terms.

- atom
- proton
- nucleus
- neutron
- electron
- shell



2. Complete the following table describing the three subatomic particles.

	Proton	Neutron	Electron
electric charge	+	neutral	−
location in the atom	in nucleus	in nucleus	outside nucleus

Name _____ Date _____

Cloze Activity
Section 1.3

Use with textbook pages 28–33.

The atom

Vocabulary	
Bohr	neutrons
Dalton	positive
electrons	protons
energy	shells
mass	subatomic particles
negative	Rutherford
neutral	Thomson

Use the terms in the vocabulary box to fill in the blanks. You can use each term more than once. You will not need to use every term.

1. Dalton suggested that matter is made up of atoms.

2. Thompson proposed that atoms contain negatively charged particles later called electrons.

3. Rutherford discovered the nucleus and its subatomic particles. He suggested that the nucleus was made up of positively charged particles called protons and particles with no charge called neutrons.

4. Bohr proposed that electrons are located in shells around the nucleus.

5. Electrons have different amounts of energy and can jump back and forth between the energy levels.

6. All atoms are made up of three subatomic particles: protons, electrons, and neutrons.

7. Protons have a positive charge, electrons have a negative charge, and neutrons have no electric charge.

8. Protons and neutrons cluster together to form the nucleus of an atom.

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Comprehension
Section 1.3

Use with textbook pages 28–33.

Contributions to atomic theory

Scientist
Bohr
Dalton
Rutherford
Thomson

Match each scientist to the statements describing his contribution to the atomic theory. Identify who was the first to propose these ideas. Each scientist may be used more than once.

1. Atoms cannot be created, destroyed, or divided into smaller particles.
   Dalton
2. Electrons occupy specific energy levels or shells.
   Bohr
3. Most of the mass of the atom is in the tiny, dense, positively charged nucleus.
   Rutherford
4. Most of the atom is empty space.
   Rutherford
5. All matter is made of small particles called atoms.
   Dalton
6. All atoms of the same element are identical.
   Dalton
7. Atoms contain negatively charged particles.
   Thomson
8. The nucleus contains positively charged particles called protons and particles with no electric charge called neutrons.
   Rutherford
9. Different elements combine together to form compounds.
   Dalton
10. Electrons move around a central nucleus.
    Rutherford