

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.

- \_\_\_\_\_ suggested that matter is made up of atoms.
- \_\_\_\_\_ proposed that atoms contain negatively charged particles later called \_\_\_\_\_.
- \_\_\_\_\_ discovered the nucleus and its subatomic particles. He suggested that the nucleus was made up of positively charged particles called \_\_\_\_\_ and particles with no charge called \_\_\_\_\_.
- \_\_\_\_\_ proposed that electrons are located in \_\_\_\_\_ around the nucleus.
- Electrons have different amounts of \_\_\_\_\_ and can jump back and forth between the energy levels.
- All atoms are made up of three \_\_\_\_\_: protons, electrons, and neutrons.
- Protons have a \_\_\_\_\_ charge, electrons have a \_\_\_\_\_ charge, and \_\_\_\_\_ have no electric charge.
- \_\_\_\_\_ and \_\_\_\_\_ cluster together to form the nucleus of an atom.

Name \_\_\_\_\_

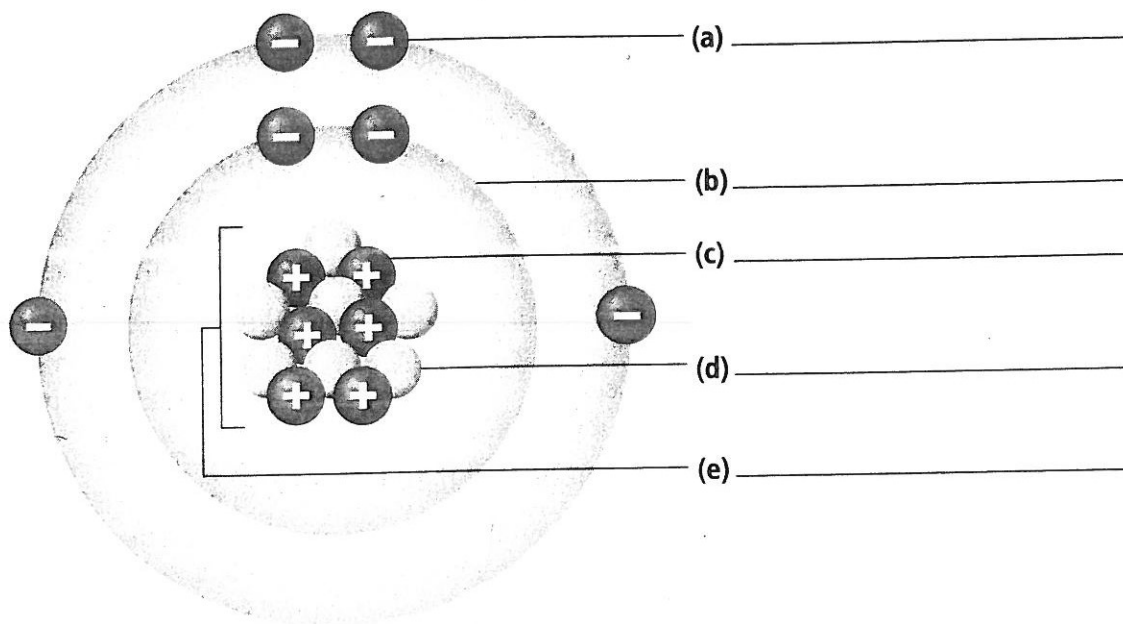
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# Atomic structure

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      |        |         |          |
| location in the atom |        |         |          |