

# Teacher's Manual • Unit 7

- E. God has provided many marvelous chemical reactions in nature to produce materials that man often finds difficult or impossible to duplicate. (260)

## Answer Key to Unit Seven

### Study Exercises: Group A (236)

1. (a) True; (b) False; (c) False; (d) False
2. Matter is anything that has weight and occupies space. properties
3. (a)
4. An atom is the smallest particle of an element that still has the chemical properties of that element.
5. No one has ever proved that an atom exists. No one has ever seen an atom.
6. sometimes

### Study Exercises: Group B (239)

1. An atom is extremely small.
2. empty space
3. protons and neutrons
4. The proton and the neutron are about equal in weight. These two particles give the atom almost all its weight.
5. The proton has a positive electrical charge and the neutron has no electrical charge.
6. The electrons are moving in orbits or shells around the nucleus.
7. negative
8. In an electrically neutral atom the number of protons equals the number of electrons since one proton and one electron together produce a neutral state.
9. (b)
10. does not
11. radioactive
12. nobody

### Study Exercises: Group C (241)

1. only one kind of atom
2. A hydrogen atom has one electron and one proton.
3. The number of an element is the same as the number of its electrons and the number of its protons.