

CONTENTS

1. Living in a World of Chemistry	1
2. The Chemical View of Matter	14
3. Atoms and the Periodic Table	38
4. Nuclear Changes	70
5. Chemical Bonding and States of Matter	100
6. Chemical Reactivity: Chemicals in Action	131
7. Acid-Base Reactions	157
8. Oxidation-Reduction Reactions	174
9. Energy and Hydrocarbons	194
10. Organic Chemicals and Polymers	224
11. The Chemistry of Life	259
12. Nutrition: The Basis of Healthy Living	304
13. Chemistry and Medicine	330
14. The Chemistry of Useful Materials	364
15. Water: Plenty of It, But of What Quality?	391
16. Air: The Precious Canopy	418
17. Feeding the World	453
Appendix A: Significant Digits	483
Appendix B: Scientific Notation	488
Appendix C: Units of Measure, Unit Conversion, and Problem Solving	494
Appendix D: Naming Organic Compounds	504
Appendix E: Answers to Self Tests and Matching Sets	511
Appendix F: Answers to Exercises	519
Appendix G: Answers to Selected Questions and Problems	521
Glossary/Index	1.1