

CONTENTS

week 1: 102
 week 2: 4
 week 3: 10
 week 4: 11
 week 5: 12
 week 6: 15
 week 7: 16
 week 8: 19
 week 9: 20
 week 10: 18
 week 11: 22
 week 12: 24
 week 13: 26
 week 14: 26

day 1

PART I

Preface vii

Acknowledgments ix

1 Introduction 1

Life and the Physical Environment 27

* 2 The Physical Environment 29

3 Adaptation to Aquatic and Terrestrial Environments 60

sol * 4 Variations in the Physical Environment 79

5 Biological Communities: The Biome Concept 103

PART II

Ecosystems 125

* 6 Energy in the Ecosystem 127

7 Pathways of Elements in the Ecosystem 148

8 Nutrient Regeneration in Terrestrial and
Aquatic Ecosystems 167

9 Regulation of Ecosystem Function 190

PART III

Organisms 203

10 Homeostasis and Life in Varying Environments 205

11 Life Histories 231

12 Sex 254

13 Family and Society 277

PART IV**Populations****299**

- 14** Population Structures 301
- 15** Population Growth and Regulation 326
- 16** Temporal and Spatial Dynamics of Populations 350
- 17** Population Genetics and Evolution 369

PART V**Species Interactions****397**

- 18** Relationships Among Species 399
- 19** Competition 425
- 20** Predation 446
- 21** Evolution Responses and Coevolution 474

PART VI**Communities****497**

- 22** Community Structure 499
- 23** Community Development 521
- 24** Biodiversity 546
- 25** History and Biogeography 572

PART VII**Ecological Applications****591**

- 26** Extinction and Conservation 593
- 27** Development and Global Ecology 614

Appendix A: International System of Units 639

Appendix B: Conversion Factors 642

Glossary 644

Index 664