

Contents

Preface	v
To the Instructor	vi
To the Student	vii

Lab	Title	Page	Text Chapter Reference
1	Scientific Method	1	1
Unit I Concepts of Cell Biology			
2	Measuring with Metric	9	4
3	Light Microscopy	19	4
4	Chemical Composition of Cells	31	2, 3
5	Cell Structure and Function	43	4
6	How Enzymes Function	57	5
Unit II Concepts of Plant Biology			
7	Photosynthesis	67	6
8	Organization of Flowering Plants	75	22
Unit III Concepts of Genetics			
9	Mitosis: Cellular Reproduction	91	8
10	Meiosis: Sexual Reproduction	101	9
11	Mendelian Genetics	111	10
12	Human Genetics	125	10
13	DNA Biology and Technology	139	11
Unit IV Concepts of Evolution			
14	Evidence of Evolution	153	14
15	Evolution of Bacteria, Protists, and Fungi	171	17, 18, 19
16	Plant Evolution	191	19
17	Early Invertebrate Evolution	207	20
18	Later Invertebrate and Vertebrate Evolution	225	20
Unit V Concepts of Animal Biology			
19	Vertebrate Body Tissues	245	26
20	Basic Mammalian Anatomy I	261	32, 33, 35
21	Chemical Aspects of Digestion	275	32
22	Basic Mammalian Anatomy II	285	30, 32, 33, 34
23	Homeostasis	301	30, 33, 34
24	The Nervous System and Senses	317	27, 28
25	Animal Development	337	36
Unit VI Concepts of Ecology			
26	Effects of Pollution on Ecosystems	355	41
Credits		363	
Index		365	

Laboratory Resource Guide and Practical Examination Answer Sheet online at www.mhhe.com/maderconcepts3