

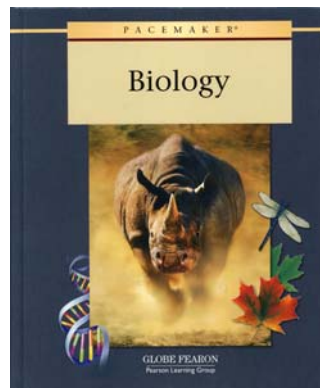
Pacemaker[®] BIOLOGY



Pearson Learning Group

correlated to

Holt Biology



Pacemaker
Biology
 Pearson Learning Group
 correlated to
Holt
Biology

Holt BIOLOGY		Pacemaker BIOLOGY
UNIT 1 Principles of Cell Biology	2	16
Chapter 1 Biology and You	4	1
1 Themes of Biology	6	2, 3, 4, 10, 11, 17, 18, 19, 20, 21, 22, 23, 23, 25
2 Biology in Your World	10	194
3 The Scientific Revolution	14	3, 6, 7, 8, 9, 10, 12, 13
Chapter 2 Chemistry of Life	26	24
1 Nature and Matter	28	17, 24, 25, 52, 53
2 Water and Solutions	31	25
3 Chemistry of Cells	34	24, 25, 302
4 Energy and Chemical Reactions	38	17, 19, 52
Chapter 3 Cell Structure	48	33
1 Looking at Cells	50	34, 35, 36, 37
2 Cell Features	55	23, 24, 33, 35, 36, 37, 38, 39, 53, 55, 74, 93, 98, 285
3 Cell Organelles	62	33, 36, 37, 38, 39, 40, 41, 43, 46, 51, 57, 113, 114
Chapter 4 Cells and Their Environment	72	51
1 Passive Transport	74	51, 53, 55, 276
2 Active Transport	81	51, 54, 55

UNIT 1 Principles of Cell Biology, cont.		
Chapter 5 Photosynthesis and Cellular Respiration	92	51
1 Energy and Living Things	94	52, 262
2 Photosynthesis	97	51, 57, 60, 112, 114, 115
3 Cellular Respiration	104	41, 51, 52, 56, 57, 58, 112, 114, 116
Chapter 6 Chromosomes and Cell Reproduction	116	33
1 Chromosomes	118	33, 42, 43, 75, 76, 317
2 The Cell Cycle	125	42, 43, 44, 45
3 Mitosis and Cytokinesis	128	33, 42, 43, 49
UNIT 2 Principles of Genetics	142	33
Chapter 7 Meiosis and Sexual Reproduction	144	33, 43, 44, 126, 397, 398
1 Meiosis	150	74, 75
2 Sexual Reproduction	150	93
Chapter 8 Mendel and Heredity	160	65
1 The Origins of Genetics	162	66, 67, 79, 154
2 Mendel's Theory	166	36, 65, 66, 67, 68, 69, 70, 72
3 Studying Heredity	170	27, 65, 66, 67, 69, 71, 75, 76, 77, 78, 79, 84, 85
4 Complex Patterns of Heredity	177	70, 71, 72, 73, 74, 75, 76, 77, 78, 87
Chapter 9 DNA: The Genetic Material	188	65
1 Identifying the Genetic Material	190	92
2 The Structure of DNA	194	73, 74
3 The Replication of DNA	198	73
Chapter 10 How Proteins Are Made	206	65
1 From Genes to Proteins	208	73, 74, 78, 92
2 Gene Regulation and Structure	215	74, 78, 79
Chapter 11 Gene Technology	226	65
1 Genetic Engineering	228	80, 81, 156
2 Human Applications of Genetic Engineering	233	82, 117
3 Genetic Engineering in Agriculture	238	81, 82, 156

UNIT 3 Principles of Evolution	248	392
Chapter 12 History of Life on Earth	250	393
1 How Did Life Begin?	252	23, 393, 401
2 The Evolution of Cellular Life	258	18, 93, 105
3 Life Invaded the Land	264	403
Chapter 13 The Theory of Evolution	274	393
1 The Theory of Evolution by Natural Selection	276	394, 395, 397, 398, 399
2 Evidence of Evolution	283	10, 213, 258, 394, 399, 400, 401, 402, 404, 405, 407
3 Examples of Evolution	288	398, 406
Chapter 14 Classification of Organisms	298	89, 90
1 Categories of Biological Classification	300	91, 92, 123, 124
2 How Biologists Classify Organisms	305	27, 79, 85, 398
UNIT 4 Principles of Ecology	316	323
Chapter 15 Populations	318	324
1 How Populations Grow	320	79, 334, 335, 336
2 How Populations Evolve	326	72, 393, 397
Chapter 16 Ecosystems	338	325
1 What is an Ecosystem?	340	124, 194, 325, 326, 327, 335, 343
2 Energy Flow in Ecosystems	345	95, 98, 103, 325, 330, 331, 332, 344
3 Cycling of Materials in Ecosystems	350	95, 116, 127, 226, 362, 363, 364, 365, 366, 367, 368, 369, 376, 375, 377, 378, 379
Chapter 17 Biological Communities	360	327
1 How Organisms Interact in Communities	362	165, 169, 327, 328, 329, 398
2 How Competition Shapes Communities	365	325, 326, 327, 347, 350, 385
3 Major Biological Communities	371	323, 325, 328, 337, 338, 339, 340, 341, 363, 364, 365
Chapter 18 The Environment	384	365, 370, 382
1 Global Change	386	363, 367, 368, 371
2 Effects on Ecosystems	390	24, 96, 116, 194, 336, 375, 377, 378, 384, 385, 386, 388, 394
3 Solving Environmental Problems	396	99, 382, 383, 384

UNIT 5 Exploring Diversity	408	88
Chapter 19 Introduction to the Kingdoms of Life	410	90
1 Introduction to Kingdoms and Domains	412	89, 90, 91, 92, 93, 94, 98, 166
2 Advent of Multicellularity	418	17, 23, 24, 34, 41, 89, 97, 100, 186
3 Complex Multicellularity	422	98, 112, 113, 204, 208
Chapter 20 Viruses and Bacteria	432	95
1 Viruses	434	92, 297, 300
2 Bacteria	442	34, 93, 94, 95, 96, 263, 388
Chapter 21 Protists	458	96
1 Characteristics of Protists	460	96, 97, 98, 99
2 Protist Diversity	464	97, 98, 99, 100, 112
3 Protists and Health	472	105
Chapter 22 Fungi	480	89
1 Characteristics of Fungi	482	90, 101, 102, 103, 105, 297
2 Fungal Diversity	485	26, 101, 102, 103
3 Fungal Partnerships	490	102, 103, 328, 329
UNIT 6 Exploring Plants	498	109
Chapter 23 Introduction to Plants	500	110
1 Adaptations of Plants	502	130, 137, 144
2 Kinds of Plants	508	4, 117, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 146
3 Plants in Our Lives	516	40, 110, 111, 117
Chapter 24 Plant Reproduction	528	150
1 Sexual Reproduction in Seedless Plants	530	126, 127, 128, 129
2 Sexual Reproduction in Seed Plants	534	130, 131, 151, 152, 153, 154, 155
3 Asexual Reproduction	541	151, 156, 157, 158
Chapter 25 Plant Structure and Function	550	136
1 The Vascular Plant Body	552	137, 138, 139, 140, 141, 142, 143, 144, 145, 146
2 Transport in Plants	560	141, 363, 364
Chapter 26 Plant Growth and Development	570	130
1 How Plants Grow and Develop	572	123, 129, 130, 141, 152
2 Regulating Growth and Development	579	145, 302, 303

UNIT 7 Exploring Invertebrates	590	163
Chapter 27 Introduction to Animals	592	165
1 Characteristics of Animals	594	4, 165, 166, 169, 170
2 Animal Body Systems	604	180, 197, 249
Chapter 28 Simple Invertebrates	616	617
1 Sponges	618	165, 167, 179
2 Cnidarians	622	165, 168, 169
3 Flatworms and Roundworms	629	169, 170, 171, 179
Chapter 29 Mollusks and Annelids	640	165
1 Mollusks	642	22, 168, 172, 173, 181
2 Annelids	651	171
Chapter 30 Arthropods	662	165
1 Features of Arthropods	664	165, 175, 176, 177, 178, 179
2 Spiders and Other Arachnids	670	175, 177
3 Insects and Their Relatives	673	165, 175, 176, 177, 178, 353, 354, 394
4 Crustaceans	680	175, 176, 179
Chapter 31 Echinoderms and Invertebrate Chordates	690	165
1 Echinoderms	692	165, 174, 179
2 Invertebrate Chordates	700	185, 186

UNIT 8 Exploring Vertebrates	708	184
Chapter 32 Introduction to Vertebrates	710	400
1 Vertebrates in the Sea and on Land	712	186, 187, 188, 189, 190, 198
2 Terrestrial Vertebrates	721	190, 191, 192, 193, 194, 195, 196
3 Evolution of Primates	731	203, 213, 214
4 The Genus <i>Homo</i>	735	75, 76, 404, 405
Chapter 33 Fishes and Amphibians	744	185
1 The Fish Body	746	187, 188, 189, 190, 191
2 Today's Fishes	751	188, 189, 190
3 Amphibians	758	185, 191, 192, 193, 194, 195
Chapter 34 Reptiles and Birds	770	185, 202
1 The Reptilian Body	772	186, 196, 197
2 Today's Reptiles	778	187, 195, 196, 197, 351
3 Characteristics and Diversity of Birds	784	204, 205, 206, 207, 351
Chapter 35 Mammals	798	209, 210
1 The Mammalian Body	800	208, 209, 216, 217, 259, 263
2 Today's Mammals	807	7, 203, 209, 210, 211, 212, 213, 214, 216, 217
Chapter 36 Animal Behavior	822	347
1 Evolution of Behavior	824	207, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356
2 Types of Behavior	830	178, 213, 214, 346-357

UNIT 9 Exploring Human Biology	842	223
Chapter 37 Introduction to Body Structure	844	224
1 Body Organization	846	41, 165, 166, 176, 225, 226, 228, 231, 232, 248
2 Skeletal System	850	41, 185, 186, 189, 225, 226, 227, 228, 229, 230, 234, 400
3 Muscular System	856	25, 225, 231, 232
4 Skin, Hair, and Nails	861	41, 251, 283, 286, 298
Chapter 38 Circulatory and Respiratory Systems	870	238
1 The Circulatory System	872	239, 240, 241, 242, 243, 244, 247, 252, 298
2 The Heart	880	241
3 The Respiratory System	885	56, 169, 243, 245, 246, 247, 248, 277
Chapter 39 Digestive and Excretory Systems	898	256
1 Your Body's Need for Food	900	61, 297, 301, 302, 303
2 Digestion	906	81, 216, 217, 248, 257, 258, 259, 260, 261, 297, 298, 302
3 Excretion	912	239, 248, 249, 250, 261, 301, 312
Chapter 40 The Body's Defenses	922	296
1 Nonspecific Diseases	924	243, 244, 252, 298, 299
2 Immune Response	927	297, 298, 299, 300
3 Disease Transmission and Prevention	930	297, 298, 299, 300, 301
4 Disorders of the Immune System	933	153, 246
Chapter 41 Nervous System	942	267
1 Neurons and Nerve Impulses	944	267, 268, 269, 270, 285
2 Structures of the Nervous System	950	267, 268, 269, 270, 271, 272, 273, 274, 275, 348
3 Sensory Systems	956	177, 268, 283, 285, 288, 289, 290, 291, 292, 293
4 Drugs and the Nervous System	961	247, 278, 304, 305
Chapter 42 Hormones and the Endocrine System	972	266
1 Hormones	974	275
2 How Hormones Work	977	276
3 The Major Endocrine Glands	982	267, 272, 275, 276, 277, 312
Chapter 43 Reproduction and Development	994	276
1 Male Reproduction System	996	311, 312, 315
2 Female Reproduction System	999	276, 311, 312, 313, 314, 315, 316, 317
3 Development	1004	310, 311, 315, 316, 317
4 Sexually Transmitted Diseases	1008	300

Appendix	Reference and Skills	1016	N/A
Reading and Study Skills			
	Becoming an Active Reader	1016	N/A
	Concept Mapping	1018	N/A
	Analyzing Word Parts	1021	Appendix A, p. 411
Laboratory Skills			
	Safe Laboratory Practices	1024	10, 11, 12
	Using a Compound Light Microscope	1028	Appendix B, pp. 412, 413
	Determining Mass and Temperature	1030	N/A
Math and Problem-Solving Skills			
	SI Measurement	1032	N/A
	Graphing	1034	N/A
Science Reference			
	Classification in Kingdoms and Domains	1036	Appendix C, pp. 414, 415
	Periodic Table	1046	N/A
Physical Sciences Refresher		1048	N/A
Glossary		1066	417-430
Spanish Glossary		1086	N/A
Index		1112	431-437
Credits		1149	438