

Correlation to Show Compatibility of *Glencoe Biology* with the Next Generation Science Standards Disciplinary Core Ideas

Glencoe Biology provides optimal flexibility for the initial implementation of the Next Generation Science Standards (NGSS) into your curriculum. This correlation to the Disciplinary Core Ideas (DCIs) will help guide and inform your curriculum decisions as you transition the NGSS into your science instruction.

Lesson Title	Disciplinary Core Ideas	Pages
Chapter 1 • The Study of Life		
1 Introduction to Biology	LS1.A, LS1.B, LS2.D	4-10
2 The Nature of Science		11-15
3 Methods of Science		16-27
Chapter 2 • Principles of Ecology		
1 Organisms and Their Relationships	LS2.B	32-40
2 Flow of Energy in an Ecosystem	LS1.C, LS2.B; PS3.A, PS3.B	41-44
3 Cycling of Matter	LS1.C, LS2.B	45-57
Chapter 3 • Communities, Biomes, and Ecosystems		
1 Community and Ecology	LS2.C, LS2.D	60-64
2 Terrestrial Biomes	LS2.D	65-73
3 Aquatic Ecosystems	LS2.D	74-89
Chapter 4 • Population Ecology		
1 Population Dynamics	LS2.A, LS2.C	92-99
2 Human Population	LS2.A	100-113
Chapter 5 • Biodiversity and Conservation		
1 Biodiversity	LS2.C	116-121
2 Threats to Biodiversity	LS2.C, LS4.C, LS4.D, ESS3.C	122-128
3 Conserving Biodiversity	LS2.C, LS4.D, ESS3.C	129-143

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Chapter 6 • Chemistry in Biology

1 Atoms, Elements, and Compounds	PS1.A	148-155
2 Chemical Reactions	PS1.B	156-160
3 Water and Solutions	LS1.A; PS1.A	161-165
4 The Building Blocks of Life	LS1.C; PS1.A	166-179

Chapter 7 • Cellular Structure and Function

1 Cell Discovery and Theory	LS1.A; PS4.C	182-186
2 The Plasma Membrane	LS1.A	187-190
3 Structures and Organelles	LS1.A	191-200
4 Cellular Transport	LS1.A; PS1.A	201-215

Chapter 8 • Cellular Energy

1 How Organisms Obtain Energy	LS1.C, LS2.B; PS3.A, PS3.B	218-221
2 Photosynthesis	LS1.C, LS2.B; PS3.A, PS3.B	222-227
3 Cellular Respiration	LS1.C, LS2.B; PS3.A, PS3.B	228-241

Chapter 9 • Cellular Reproduction

1 Cellular Growth	LS1.A, LS3.A	244-247
2 Mitosis and Cytokinesis	LS1.B, LS3.A	248-252
3 Cell Cycle Regulation	LS1.A, LS1.B, LS3.A	253-265

Chapter 10 • Sexual Reproduction and Genetics

1 Meiosis	LS1.A, LS1.B, LS3.A, LS3.B	270-276
2 Mendelian Genetics	LS1.B, LS3.A, LS3.B	277-282
3 Gene Linkage and Polyploidy	LS1.B, LS3.A, LS3.B	283-293

Lesson Title	Disciplinary Core Ideas	Pages
Chapter 11 • Complex Inheritance and Human Heredity		
1 Basic Patterns of Human Inheritance	LS1.B, LS3.A, LS3.B	296-301
2 Complex Patterns of Inheritance	LS1.B, LS3.A, LS3.B	302-310
3 Chromosomes and Human Heredity	LS1.B, LS3.A, LS3.B	311-323
Chapter 12 • Molecular Genetics		
1 DNA: The Genetic Material	LS1.A, LS1.C, LS3.A, LS3.B	326-332
2 Replication of DNA	LS1.A, LS1.C, LS3.A, LS3.B	333-335
3 DNA, RNA, and Protein	LS1.A, LS1.C, LS3.A, LS3.B	336-341
4 Gene Regulation and Mutation	LS1.A, LS1.C, LS3.A, LS3.B	342-357
Chapter 13 • Genetics and Biotechnology		
1 Applied Genetics	LS1.A, LS3.A	360-362
2 DNA Technology	LS1.A, LS1.C, LS3.A	363-371
3 The Human Genome	LS1.A, LS1.C, LS3.A	372-387
Chapter 14 • The History of Life		
1 Fossil Evidence of Change	ESS1.C, PS1.C	392-400
2 The Origin of Life	ESS2.E	401-415
Chapter 15 • Evolution		
1 Darwin's Theory of Evolution by Natural Selection	LS4.B, LS4.C	418-422
2 Evidence of Evolution	LS2.D, LS4.A, LS4.B, LS4.C	423-430
3 Shaping Evolutionary Theory	LS4.B, LS4.C; ESS2.E	431-449
Chapter 16 • Primate Evolution		
1 Primates	LS4.A, LS4.C	452-460
2 Hominids to Hominins	LS4.A, LS4.C	461-466
3 Human Ancestry	LS4.A, LS4.C	467-481

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Chapter 17 • Organizing Life's Diversity

1 The History of Classification	This topic is a prerequisite of LS4.A, LS4.B, and LS4.C.	484-489
2 Modern Classification	LS4.A, LS4.B, LS4.C	490-498
3 Domains and Kingdoms	This topic supports LS4.A, LS4.B, and LS4.C.	499-511

Chapter 18 • Bacteria and Viruses

1 Bacteria	LS1.A, LS1.B, LS1.C, LS2.B	516-524
2 Viruses and Prions	This topic is an extension of LS1.A.	525-539

Chapter 19 • Protists

1 Introduction to Protists	LS1.A, LS1.B, LS4.C	542-545
2 Protozoans—Animal-like Protists	LS1.A, LS1.B, LS4.C	546-552
3 Algae—Plantlike Protists	LS1.A, LS1.B, LS4.C	553-560
4 Funguslike Protists	LS1.A, LS1.B, LS4.C	561-573

Chapter 20 • Fungi

1 Introduction to Fungi	LS1.A, LS1.B	576-581
2 Diversity of Fungi	LS1.A, LS1.B, LS4.C	582-586
3 Ecology of Fungi	LS1.A	587-599

Chapter 21 • Introduction to Plants

1 Plant Evolution and Adaptations	LS1.A, LS4.C	604-609
2 Nonvascular Plants	LS1.A, LS4.C	610-612
3 Seedless Vascular Plants	LS1.A, LS4.C	613-616
4 Vascular Seed Plants	LS1.A, LS4.C	617-629

Lesson Title	Disciplinary Core Ideas	Pages
Chapter 22 • Plant Structure and Function		
1 Plant Cells and Tissues	LS1.A, LS1.B, LS1.C	632-638
2 Roots, Stems, and Leaves	LS1.A, LS1.B, LS1.C	639-647
3 Plant Hormones and Responses	LS1.A	648-659
Chapter 23 • Reproduction in Plants		
1 Introduction to Plant Reproduction	LS1.A, LS1.B	662-667
2 Flowers	LS1.A	668-673
3 Flowering Plants	LS1.A, LS1.B	674-687
Chapter 24 • Introduction to Animals		
1 Animal Characteristics	LS1.A, LS1.B	692-697
2 Animal Body Plans	LS1.A, LS1.B, LS4.C	698-704
3 Sponges and Cnidarians	LS1.A, LS4.C	705-723
Chapter 25 • Worms and Mollusks		
1 Flatworms	LS1.A, LS1.B, LS4.C	726-730
2 Roundworms and Rotifers	LS1.A, LS1.B, LS4.C	731-736
3 Mollusks	LS1.A, LS1.B, LS4.C	737-744
4 Segmented Worms	LS1.A, LS1.B, LS4.C	745-759
Chapter 26 • Arthropods		
1 Arthropod Characteristics	LS1.A, LS1.B, LS4.C	762-769
2 Arthropod Diversity	LS1.A, LS4.C	770-774
3 Insects and their Relatives	LS1.A, LS4.C	775-789
Chapter 27 • Echinoderms and Invertebrate Chordates		
1 Echinoderm Characteristics	LS1.A, LS1.B, LS4.C	792-801
2 Invertebrate Chordates	LS1.A, LS4.C	802-815

Lesson Title	Disciplinary Core Ideas	Pages
Chapter 28 • Fishes and Amphibians		
1 Fishes	LS1.A, LS1.B, LS4.C	820-827
2 Diversity of Today's Fishes	LS1.A, LS4.C	828-833
3 Amphibians	LS1.A, LS1.B, LS4.C	834-849
Chapter 29 • Reptiles and Birds		
1 Reptiles	LS1.A, LS1.B, LS4.C	852-860
2 Birds	LS1.A, LS1.B, LS4.C	861-877
Chapter 30 • Mammals		
1 Mammalian Characteristics	LS1.A, LS1.B, LS4.C	880-888
2 Diversity of Mammals	LS1.A, LS4.C	889-905
Chapter 31 • Animal Behavior		
1 Basic Behaviors	LS2.D	908-915
2 Ecological Behaviors	LS2.D	916-931
Chapter 32 • Integumentary, Skeletal, and Muscular Systems		
1 The Integumentary System	LS1.A	936-940
2 The Skeletal System	LS1.A	941-946
3 The Muscular System	LS1.A	947-959
Chapter 33 • Nervous System		
1 Structure of the Nervous System	LS1.A	962-967
2 Organization of the Nervous System	LS1.A	968-972
3 The Senses	This topic is an extension of LS1.A.	973-976
4 Effects of Drugs	This topic is an extension of LS1.A.	977-989

Lesson Title	Disciplinary Core Ideas	Pages
Chapter 34 • Circulatory, Respiratory, and Excretory Systems		
1 Circulatory System	LS1.A	992-999
2 Respiratory System	LS1.A	1000-1004
3 Excretory System	LS1.A	1005-1017
Chapter 35 • Digestive and Endocrine Systems		
1 The Digestive System	LS1.A	1020-1024
2 Nutrition	This topic is an extension of LS1.A.	1025-1030
3 The Endocrine System	LS1.A	1031-1045
Chapter 36 • Human Reproduction and Development		
1 Reproductive Systems	LS1.A	1048-1053
2 Human Development Before Birth	LS1.B	1054-1061
3 Birth, Growth, and Aging	This topic is an extension of LS1.B.	1062-1073
Chapter 37 • The Immune System		
1 Infectious Diseases	LS1.A	1076-1083
2 The Immune System	LS1.A	1084-1091
3 Noninfectious Disorders	LS1.A	1092-1103